ABSTRACT OF

Lectures

ON

DISEASES OF THE GALL-BLADDER AND BILE-DUCTS.[1]

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LECTURE I.

Delivered on March 8th.

MR. PRESIDENT AND GENTLEMEN,—Had time permitted the anatomy of the gall-bladder and bile-ducts would have formed a subject of sufficient interest for my first lecture but the number and importance of the matters I propose to consider clearly demonstrate this to be an impossibility, some of the more important anatomical points, however, I must not omit.

Congenital malformations.—There is apparently no part of the biliary apparatus, except the liver, which may not be absent. While it is not to be wondered at in the case of the gall-bladder and cystic duct since they are normally wanting in certain animals and are frequently obliterated by disease in the human subject, it affords serious food for thought to find that life has been possible for six months where even the hepatic and common ducts are represented by mere fibrous cords. Hour-glass shaped gall bladder is probably not uncommon, for though I have found only one specimen in the museums, and that at Middlesex Hospital, I have myself operated on two cases in which the distal part of the gall-bladder contained calculi and was connected with the gall-bladder proper by a narrow neck. On numerous occasions I have found the ordinary position of the gall-bladder vacant, and the shrunken viscus to be situated near the transverse fissure of the liver under cover of the pylorus, with the transverse colon adherent over it. On two occasions I have found the gall-bladder, containing gall-stones, displaced very much to the right; in one instance the liver was almost bifid, the left lobe predominating and pushing the right, and with it the gall-bladder, so far round as to make it project into the lumbar region. In palpating the common duct for gall-stones the surgeon frequently feels several more or less hard nodules within the free border of the lesser omentum, by the side or in front of the common duct, and unless it be borne in mind that three or four lymphatic glands normally exist here they may be apt to mislead, especially as they are not unusually considerably enlarged where there is gall-stone irritation. The large peritoneal pouch bounded above by the right lobe of the liver, below by the ascending layer of the transverse meso-colon covering the duodenum internally, externally by the peritoneum lining the parietes, posteriorly by the ascending meso-colon covering the kidney, and internally by the peritoneum covering the spine, has been long recognised, but perhaps not sufficiently appreciated, in gall-bladder surgery. Mr. Rutherford Morison drew attention to it in 1894.[2] He places such reliance on the ease and safety with which it can be drained that he does not advocate much time being spent in suturing incisions in the gall-bladder or bile-ducts. It is interesting to note that it is capable of holding nearly a pint of fluid before it overflows into the general peritoneal cavity. A deformity of the liver, congenital or acquired, may at times lead to a difficulty in diagnosis, or in treatment. I refer to a tongue-shaped prolongation of the right lobe, which may project below the costal margin for several inches and simulate a tumour of the liver or an enlarged gall-bladder. Professor Riedel has described it, and the projection is sometimes known as Riedel's lobe. It is said to be uniformly due to cholelithiasis, but in one case at least in my experience it was not associated with gall-stones.

I propose to consider my subject under four headings: (1) inflammatory affections; (2) tumours; (3) the surgical treatment of gall-stones; and (4) intestinal obstruction dependent on gall-stones.

Catarrh of the gall-bladder and bile-ducts.—The larger bile-ducts and the gall-bladder, being lined with mucous membrane, are, like other mucous passages, subject to catarrh, which may be acute or chronic. As, however, acute and chronic catarrhal jaundice are subjects of medical rather than surgical interest, I can only briefly consider them on account of want of time. Acute catarrh is supposed to give rise to the evanescent form of icterus known as catarrhal jaundice, which, more frequently occurring in young persons, usually comes on as a sequence of dyspepsia or as a result of exposure to cold, and is ordinarily unaccompanied by pain or serious illness. When it is borne in mind that the bile-ducts have only a limited calibre, that the mucous lining is capable of swelling so as to occlude the passage, and that the secretion of bile takes place under very low blood tension (according to Naunyn 110 to 220 mm. of water), and is, therefore, arrested by slight backward pressure, it is easy to comprehend how catarrh in this situation should lead to jaundice, though absolute proof of the correctness of the theory is wanting, since simple catarrhal jaundice furnishes no post-mortem subjects. With regard to its etiology, an extension from the duodenum is probably the usual cause of acute catarrhal jaundice, but exposure to cold, extension of inflammation from the liver, carcinoma of the liver, gall-stones, hydatids, pneumonia, and other acute inflammations must be mentioned as causes of catarrh, direct or indirect. Dr. Murchison gives gout and syphilis as causes, and Dr. Fagge includes under this heading jaundice due to fright and that occurring in epidemics. Although it is well known that in cancer of the liver jaundice is a very variable sign, it is not always recognised that the icterus is at times dependent on the associated catarrh, which may be relieved by treatment, though the original disease persists.

Chronic cholangitis or chronic catarrh of the bile-ducts may be simply a sequel to the acute form, and may then give rise to a more or less persistent jaundice leading to a suspicion of serious organic disease. Although there are dyspeptic symptoms due to the associated gastro-intestinal catarrh, with jaundice and some loss of weight, the retention of strength and the absence of serious sequelæ, such as ascites and hæmorrhage, generally enable a good prognosis to be given, especially as the symptoms usually yield to proper treatment. Catarrh of the bile-ducts probably always accompanies jaundice from whatever cause, and as Dr. Moxon has pointed out, a colourless mucus is always found in the bile-ducts when an obstruction in the common duct is complete. A search through the pathological records of Guy's Hospital for twenty years failed to discover any exception to this rule. When the obstruction is only partial, the mucus may be well charged with bile, as the backward pressure is not sufficient to stop the secretion and pouring out of bile into the ducts. Gall-stones are probably always accompanied by catarrh, which, giving rise to the formation of thick ropy mucus, leads to attacks of pain when passing, and it seems not unlikely that some of the minor seizures of pain are of this nature. Although the jaundice in cholelithiasis is usually produced by a gall-stone obstructing the common or hepatic ducts, I am convinced that in many cases jaundice is present when the concretion is in the gall-bladder or in the cystic duct, the obstruction to the flow of bile being caused by an inflammatory swelling of the mucous membrane of the bile channels caused by extension from the seat of obstruction. Riedel[3] states that about two-fifths of the causes of jaundice in cholelithiasis arise in this way. The treatment of chronic catarrhal jaundice is at first medical, and if the disease prove obstinate a course at Harrogate or Carlsbad will be likely to do good if the ailment be functional, but that failing, the question of some organic cause that may be removable by surgical treatment should be considered. Dr. Thudichum, describes a catarrh of the finest ramifications of the bile ducts which causes their lining to be shed in the shape of biliary casts. He considers that these often form the nucleus of gall-stones where the catarrh is associated with decomposition of bile. This has been termed by Meckel "lithiatic catarrh"; perhaps a better term is desquamating anglo-cholitis or stone-forming catarrh

[1] Mr. Mayo Robson circulated at his lectures a table of 170 operations on the gall-bladder and bile ducts, performed by himself, in which the particulars of each case were recorded. We regret that want of space prevents its reproduction in our columns.

[2] Brit. Med. Jour., March 3rd, 1894.

[3] Gumprecht, Deutsche Medicinische Wochenschrift, 1895, No. 15.

of the bile-ducts. It doubtless has great etiological importance in reference to gallstones, especially when associated with decomposition due to the presence of micro-organism in the stagnant fluid in the ducts.

Catarrhal cholecystitis, or chronic catarrh of the gall-bladder without jaundice, forms a distinct and definite disease, and I have seen several cases in which cholelithiasis has been diagnosed and operation advised; but where neither the gall-bladder nor ducts contained anything firmer than thick, ropy mucus, which was apparently the cause of painful contractions of the gall-bladder simulating gall-stone seizures. In one case of this kind, in a woman, aged sixty years, on whom I operated with Mr. Clifton of Sheffield, the gall-bladder contained bile mixed with thick, ropy mucus. There were no other signs of disease, but the gall-bladder was very large and pouched and the mucous membrane thickened. Cholecystotomy was performed and the drainage was continued for a fortnight, after which the wound was allowed to close. The patient after two years continues well. Dr. Byron Robinson[4] describes a case in which there were attacks of pain like cholelithic seizures, which he thought were dependent on kinking of the common bile duct producing obstruction to the flow of bile into the duodenum, but which I think may be more easily explained on the hypothesis that it was a case of chronic catarrhal cholecystitis. It came on six months after the removal of gall-stones from the gall-bladder. On opening the abdomen the gall-bladder, though free from stones, was found to be considerably enlarged, although the duct was patent, as proved by syringing water through it into the duodenum. Cholecystotomy resulted in recovery. In these cases the gall-bladder is usually distended, but it rarely forms a distinct tumour, and there is an absence of pain on pressure over it. Unless gall-stones have been present at some time there are usually no adhesions of the gall-bladder or ducts to the neighbouring viscera, proving that the inflammation has not extended through to the peritoneal coat, as it usually does when dependent on cholelithiasis. The benefit derived from a systematic course of treatment in these cases renders it advisable that medical should always precede surgical treatment. The diagnosis from cholelithiasis may usually be made by observing that the attacks are less severe and less prolonged than in true gall-stone seizures; that no gall-stones are found in the evacuations after an attack; that jaundice seldom supervenes, and, if it does, is only very slight; that there is no tenderness on pressure between the ninth costal cartilage and the umbilicus; and that the affection will usually completely yield to treatment. In chronic catarrh of the gall-bladder regular exercise, massage over the hepatic region, the avoidance of anything tight around the waist, careful regulation of the diet, and the judicious employment of saline aperients should be in all cases adopted. The spasmodic attacks may require the administration of a sedative, and in some cases, like those referred to, nothing short of a subcutaneous injection of morphia will do any good. If after a few weeks of general treatment the symptoms are not relieved the case will probably be thought to be one of gall-stones, and operative treatment will be considered advisable. If the gall-bladder and ducts be found free from gall-stones cholecystotomy and drainage should nevertheless be performed, and it will be found useful after the third day to syringe gently a little warm water through the drainage-tube daily so as to wash out the ducts, and after a fortnight or more the tube may be left out and the wound allowed to close. General treatment directed to the cause should be continued for some time afterwards. My proposal, in fact, is to treat obstinate catarrh of the gall-bladder as we do catarrh of the urinary bladder—first by medical and general remedies, and, those failing, to secure physiological rest by means of drainage.

Suppurative inflammation of the bile passages.—At first sight suppurative inflammation of the gall-bladder and bile ducts would seem to be capable of description under one heading, but the subject is by no means as simple as it would appear. Simple empyema or suppurative catarrh of the gall bladder differs *in toto* from phlegmonous cholecystitis, which, however, is also associated with pus in the gall-bladder, but which is one of the most fatal of diseases if not operated on expeditiously, as not only is there a tendency to gangrene, but to a rapidly spreading lethal peritonitis. The different clinical characters of suppurative inflammation can probably be accounted for by the presence or absence of certain organisms, and although the bacteriology of this region is still in its infancy sufficient good work has been done to make a review of it well worth considering. It has been supposed that the bile is an antiseptic fluid which tends to prevent decomposition in the alimentary canal, but in a series of observations which I published some years ago[5] on a case of biliary fistula I found that the absence of bile from the intestine of a woman during a period of fifteen months did not lead to any irregular fermentative process, showing that the alleged antiseptic effect of bile on the fæces is probably imaginary. Normal bile is, however, generally sterile. This was proved by Netter in 1884,[6] who experimented on dogs, and the fact has been confirmed by Gilbert and Girode,[7] and later by Naunyn[8] who found it sterile in two cases within a few hours of death. Frequent inoculative experiments on animals have confirmed these observations, thus explaining a well-known fact that in many cases bile has been extensively poured out into the peritoneal cavity without setting up peritonitis; but in disease of the gall-bladder or bile-ducts the bile is seldom or never sterile, and is capable of producing severe peritonitis. Bloch has demonstrated that the bile in cases of disease of the gall-bladder or bile-ducts always contains micro-organisms, hence he thinks it advisable to perform cholecystotomy in two stages, in order to avoid soiling the peritoneum and producing infective peritonitis. When the flow of bile along the ducts is arrested, micro-organisms often invade the gall-bladder either from the blood or the intestine. Charcot and Gombault[9] demonstrated the presence of organisms within it after ligaturing the common duct in dogs. This was confirmed by Netter in 1886,[10] who found that twenty-four hours after aseptic ligature of the common duct in dogs, organisms, both staphylococcus and bacillus coli communis, could be cultivated from the bile. The bacillus coli communis exists normally in the human body, and is said to be the most abundant and most constant of the bacteria found in man in health. At one time, as shown by Escherich,[11] it may act as an ordinary pyogenic organism producing local abscesses, at another as an active pathogenic germ producing fatal septicæmia. Mr. C. B. Lockwood[12] found streptococci and other organisms, but no amœbæ coli in an empyema of the gall-bladder. Netter[13] found staphylococci and streptococci present in pathological human bile, and Martin,[14] Gilbert and Girode[15] and Bouchard[16] have found the bacillus coli communis in the bile in cases of inflammation of the biliary passages. In acute or phlegmonous cholecystitis the walls of the gall-bladder are swollen and œdematous, and may be infiltrated with pus. In three out of five of such cases Naunyn found the bacillus coli communis in the pus. Barbacci and others have shown that peritoneal sepsis may occur without perforation of the gut. The spread of infection through the walls of the gall-bladder can readily be explained, on the same hypothesis, showing how virulent peritonitis may arise in these cases, though there be no perforation. Gilbert and Girode[17] found typhoid bacilli in the pus from a case of empyema of the gall-bladder which came on as a sequence of enteric fever. Gilbert and Dominici[18] also assert that they produced suppuration in the gall-bladder and liver of rabbits by injecting a culture of typhoid bacilli into the common duct. These biological facts are borne out by the clinical observations of Dr. Murchison and of Dr. Hale White, who have found evidence of inflammation and ulceration in the gall-bladder in well-marked and fatal cases of typhoid fever, there being no other cause than the specific disease to account for the trouble. Chiari[19] investigated systematically a series of 22 cases of typhoid fever. With the exception of 3 cases, one of which was in the infiltrating and two were in the necrotic stage, he obtained typhoid bacilli invariably out of the gall-bladder, and in 15 cases they were obtained in pure culture. In 13 of the 19 cases in which a positive result was obtained

[4] American Medico-Surgical Bulletin, April 18th, 1896.

[5] Proceedings of the Royal Society, vol. xlvii.
[6] Le Progrès Médical, 1886.
[7] Comptes Rendus. Société de Biologie de Paris, 1890, No. 39.
[8] Klinik der Cholelithiasis, 1892.
[9] Archives de Physiologie Normale et Pathologique, 1876, p. 453.
[10] Le Progrès Médical, 1886, p. 992.
[11] Fortschritte der Medicin, 1885. [12] THE LANCET, March 2nd, 1895.
[13] Archives de Physiologie Normale et Pathologique, 1886, p. 7.
[14] Ibid.
[15] Comptes Rendus, Société de Biologie de Paris, Nos. 90 and 91.
[16] Ibid., 1890.
[17] Société de Biologie de Paris. Dec. 2nd, 1893.
[18] Ibid., Dec. 23rd, 1893
[19] Zeitschrift für Heilkunde, Band xv., p. 199.

there was inflammation of the gall-bladder with small-celled infiltration, œdema, and hyperæmia. In all 22 cases the diagnosis of typhoid fever was confirmed by cultivations from the spleen, mesenteric glands, or liver, or from the larger bile-ducts. How do they reach the gall-bladder? There are three possibilities; either they enter by the bile-ducts, or from the blood, or directly through the wall of the gall-bladder. The last mentioned manner must be very exceptional. Their entrance from the blood has been apparently disproved, and it is therefore probable that they enter by the bile-ducts. There is no doubt that the bacilli multiply in the gall-bladder, and it is possible that they may be responsible for post-typhoidal cholecystitis, for gall-stones, and also for relapses of the disease.

Simple empyema.—Suppurative catarrh or simple empyema of the gall-bladder or suppurative cholecystitis is as a rule associated with gall-stones, but tumours of the bile-ducts, typhoid and other fevers, and other unexplained conditions may also be the predisposing factors, though infection by pyogenic organisms is probably in every case the true exciting cause. Empyema of the gall-bladder must always be looked on as a serious affection, both on account of its causes and its sequelæ, but from a clinical standpoint there is one form which is decidedly less serious than the other. The less serious I prefer to discuss first under the term simple empyema of the gall-bladder; the more serious form I shall consider as a distinct and special disease under the name of phlegmonous cholecystitis. When we bear in mind Charcot's and Gombault's experiments on ligature of the common duct in dogs just referred to, the wonder is that all impacted gall-stones are not associated with empyema; yet such is not the case, and it is only in a certain small percentage that the catarrh passes on to suppuration. When there is an obstruction or any irritation in the cystic duct a simple empyema may result, but when the obstruction is in the common duct it may be associated with suppurative cholangitis, the former being a local suppurative process, the latter an extremely serious disease, rapidly followed by general symptoms, and unless treated by operation often ending fatally. In simple empyema the symptoms will at first depend on the cause; and as this is, in the great majority of cases, cholelithiasis (Courvoisier found empyema to be caused by gall-stones in forty-one out of fifty-five cases) there will be the usual history of gall-stone seizures, followed by a swelling under the right lobe of the liver, and by a continued instead of an intermittent pain. At first the constitutional symptoms may be only slightly marked, and there may be no increase of temperature, though in other cases rigors or chills with fever will point to the formation of pus. The loss of appetite, fever, and general malaise usually lead to loss of flesh and weight. As a rule there is no jaundice or only a slight icteric tinge dependent on associated catarrh of the bile-ducts. Tenderness is nearly always present in consequence of local adhesive peritonitis. The tumour, if seen at an early stage, will move with respiration, descending with the liver and being felt as a rounded swelling. After a time the swelling may become more diffused and general, and the movements during respiration will be less marked or may cease owing to the inflammation extending to the abdominal walls. If the suppuration extends beyond the gall-bladder the pus may make its way through the parietes, and an abscess may form under the ribs. The pus usually, however, selects a more tortuous passage, and following the suspensory ligament of the liver it reaches the umbilicus. The abscess may even burst at a distance from its origin—for instance, over the pubes or over the cæcum. There are generally peritoneal adhesions which prevent extravasation into the general peritoneal cavity, but the pus may make its way into neighbouring organs. If we bear in mind the pouch of peritoneum I have described, it is not to be wondered at that a collection of pus should at times form in that region resembling a peri-renal abscess, though inside the peritoneum and limited by adhesions. Needless to say, an abscess of the gall-bladder only requires treating on general surgical principles by opening and drainage, but at the same time the cause must not be overlooked, as it may often be removed at the same time that the abscess is evacuated. Where the pus is in the gall-bladder cholecystostomy will be advisable. After exposing the gall-bladder it will be wise to aspirate before opening it, in order to avoid soiling the tissues with pus. The walls of the gall-bladder may be found so rotten as to be incapable of holding sutures, or, as in a case lately recorded by Dr. Willie Meyer, there may be small abscesses in the inflamed wall of the gall-bladder itself. In such cases cholecystectomy may be required. In two cases of empyema of the gall-bladder I simply evacuated the pus, removed the gall-stones, and packed the cavity with iodoform gauze, and although the peritoneal cavity was widely opened no harm resulted, as a lymph barrier was soon thrown out limiting the only partly disinfected area. In abscess due to empyema of the gall-bladder forming at a distance from the seat of origin, it may be wise at first simply to open and drain the abscess and on some future occasion to perform cholecystostomy. In some cases of empyema the patient may not be in a fit condition to bear a prolonged operation, and it may, therefore, be wiser to perform a simple cholecystostomy and to defer the removal of the cause until an examination of the discharge shows it to be sterile, or nearly so.

Acute phlegmonous cholecystitis and gangrene of the gall-bladder.—Acute or phlegmonous inflammation of the gall-bladder was described by Courvoisier in 1890, under the name of acute progressive empyema of the gall-bladder, and he states that it usually terminates fatally in a few days from diffuse peritonitis. Only seven cases are recorded in Courvoisier's statistics. Potain[20] also mentions that in addition to the ordinary variety of empyema of the gall-bladder there is a very grave condition of acute empyema, which is followed by rapid peritonitis and death. In one case which he describes death occurred on the second day after the onset of the attack, and although there was no perforation of the walls of the viscus infection had spread through the coats to the general peritoneal cavity. Osler[21] refers to it as an extremely rare disease. As to the symptoms, although the condition is usually associated with gall-stones, acute cholecystitis may arise quite independently—in this way resembling appendicitis, which may occur without the presence of foreign bodies. Typhoid fever and typhus fever, cholera, malaria, sepsis after operation, puerperal fever, and other unknown conditions may give rise to it. Whatever be the cause, the disease usually manifests itself somewhat suddenly with pain on the right side of the abdomen, rapidly becoming general. A rapid and feeble pulse, quick thoracic breathing, fever, intense depression, marked tenderness on pressure, especially over the right side of the abdomen, rapidly developing tympanites, persistent vomiting, and an extremely anxious expression of countenance are usually present. The acute peritonitis, which is significant of the disease, may be localised at first, but later becomes general. Jaundice may or may not be present, and although an elevation of temperature is usual, it is by no means constant and affords only slight assistance in the diagnosis or prognosis. If the disease be of the very acute or gangrenous variety death speedily occurs, but if of the sub-acute form an abscess may develop around the gall-bladder and the peritonitis may become localised, the disease then resembling a perityphlitic abscess in its course.

Diagnosis.—The diagnosis of phlegmonous cholecystitis practically resolves itself into the diagnosis of the cause of acute peritonitis, starting on the right side of the abdomen. Although this may be due to perforation of the stomach at or near the pylorus, to perforation of the duodenum or the ascending colon, to perforation of the gall-bladder or the bile-ducts, and to other such-like peritoneal catastrophes, the chief affection for which it is likely to be mistaken is acute appendicitis. In appendicitis the pain begins at a lower point in the abdomen and passes towards the umbilicus, whereas in gall-bladder trouble it begins below the right costal margin and passes towards the epigastrium and back to the right scapular region. In all gall-bladder inflammations there is almost invariably a tender spot a little above and to the right of the umbilicus, or, to be more exact, at the junction of the upper two-thirds with the lower third of a line drawn from the ninth rib to the umbilicus. In appendicitis there is in the same way a tender spot at the junction of the outer third with the inner two thirds of a line drawn from the umbilicus to the anterior superior spine of the ilium, known as McBurney's point. The symptoms of acute peritonitis and paralytic obstruction of the bowels are common to both. Fortunately, the treatment by exploratory incision is appropriate to the various conditions mentioned, so that no serious error is likely to arise in case of mistaken diagnosis.

Treatment.—Relief of pain by subcutaneous injections of

[20] Journal de Médecine et Chirurgie, November, 1882.
[21] Principles and Practice of Medicine.

morphia, will probably always be demanded as a primary measure, and as it is clearly impossible to make a diagnosis of the serious condition within the first few hours, warm applications, absolute rest, the stoppage of feeding by the mouth except in small quantities, and the relief of symptoms as they arise must be followed out; but as soon as the diagnosis of phlegmonous cholecystitis can be established, and it is found that the patient is getting worse, an exploratory incision should be made and the gall-bladder incised and drained, the cause if found being removed. If, however, gangrene be discovered the gall-bladder should be removed, the indications for that measure being as distinct as in the case of a gangrenous vermiform appendix. If, in the subacute cases the inflammation becomes localised and a swelling with tenderness be found beneath the right costal margin, incision and drainage are called for, when at the same time cholecystotomy may be performed, and if gall-stones be present in the gall-bladder or ducts they may be removed. If the patient be too ill to bear a prolonged operation the latter procedure may be left to a subsequent occasion.

Gangrene of the gall-bladder is probably only an extreme degree of phlegmonous cholecystitis. The comparative frequency of gangrene in the vermiform appendix might lead one to suppose that gangrenous inflammation of the gall-bladder would not be uncommon, yet it is extremely rare, and, so far as I know, the case reported by Dr. L. W. Hotchkiss is the only one recently recorded. In order to explain the occurrence of gangrene three factors have to be borne in mind: (*a*) Thrombosis of the nutrient vessels; (*b*) bacterial infection; and (*c*) absence of drainage, and therefore tension. The two latter are present in both gall-bladder and appendix inflammation, but the first factor is more frequent in the vermiform appendix, which is only supplied by one nutrient artery, whereas the gall-bladder has a very free blood supply, not only through the branches of the cystic artery, but also through their anastomosis with the hepatic vessels, where the gall-bladder is fixed to the liver. In Dr. Hotchkiss's case there was an abnormal circular constriction of the gall-bladder with lymph infiltration, which was apparently sufficient to cut off the blood supply from the extremity of the gall-bladder.

Infective and suppurative cholangitis.—Infective and suppurative cholangitis, or suppurative catarrh of the bile-ducts, are subjects of deep interest to the surgeon, since the medical treatment of these ailments is somewhat limited. Cholelithiasis is by far the most common cause, and in the museums there are several cases illustrating it. Other causes are hydatid disease, malignant disease of the liver, and typhoid fever. The causes mentioned may be truly termed predisposing, since the true exciting cause is the presence of pyogenic organisms. The bacillus coli communis produces an exudative inflammation of the ducts, and may actually cause abscesses within the walls of the biliary passages. Hepatitis and liver abscess frequently follow on cholangitis, and this is usually followed by general and fatal infection of the system. Endocarditis is at times set up, and as it has been known to follow cholangitis without hepatitis,[22] and cholangitis without abscess, this cause should never be lost sight of in any case of ulcerative endocarditis. The bacillus in these cases in the vegetations on the inflamed endocardium has been found to be identical with the one found in the bile. As to the symptoms in suppurative cholangitis there is progressive enlargement of the whole liver, which may descend as low as the umbilicus, the swelling being uniform, smooth, and tender to pressure. If the cause be in the common duct, and the gall-bladder has not previously become contracted, there will be the additional enlargement caused by its distension; but when contraction has taken place, and also when the obstruction is in the hepatic duct, there will be an absence of the signs of empyema of the gall-bladder. Pain may be entirely absent, as in one case on which I operated, where the disease was dependent on cancer of the common duct; but where it is dependent on gall-stones the pain may be severe and paroxysmal, each attack being accompanied by ague-like seizures and an intensification of the jaundice. Jaundice is always present and is usually both persistent and intense. Continued fever, with occasional rigors and profuse perspiration, forms a feature of the disease, and with this there is rapid loss of flesh and strength. Pneumonia and pleurisy, ending in empyema, are sufficiently common to be characterised as distinct concomitants of suppurative cholangitis. The disease is an extremely serious one and may prove fatal, though if the cause can be removed at an early stage recovery may occur. If the disease be less acute the inflammation may concentrate itself in some part of the liver leading to abscess, which may form a distinct tender swelling and give rise to the usual symptoms and signs of hepatic abscess. As to treatment, unless evacuation and drainage of the infected contents of the bile passages can be accomplished treatment is practically useless. Cholecystotomy should, therefore, be performed, and free drainage established and continued until the bile is sterile or nearly so. Although good results cannot be expected in all cases, an amelioration of the symptoms may be looked for in a fair proportion, and complete relief in others. If a localised abscess be discovered in the liver it should be opened and drained, and though it is scarcely to be expected that operation can be always successful in these serious cases the chances of permanent benefit is worth snatching at, even in the most desperate conditions. Of general means, warm applications to the hepatic regions, an initial mercurial purge followed by milder laxatives, intestinal antisepsis by administering bismuth and salol, the relief of pain by sedatives if called for, and the treatment of symptoms as they arise, will afford some amelioration, though they will probably only give temporary relief. Although surgeons have been performing cholecystostomy for infective cholecystitis and for gall-stones producing infective cholangitis for some years, I think it is only right to give the chief credit of specially operating for cholangitis to M. Terrier. He writes in the *Revue de Chirurgie* for 1895, p. 966:—"Thanks to the opening in the gall-bladder a certain number of important therapeutic results follow: (1) the septic contents of the gall-bladder are evacuated; (2) calculi which are most frequently present there are removed; (3) the other biliary passages more or less obstructed, either by calculi or by swelling of their walls, are rendered as free as possible; (4) the septic bile is allowed to escape and mechanically washes out the lower passages carrying away through the drainage-tube many of the infectious ailments; (5) the relief of pressure prevents absorption of the septic elements; and (6) the relief to the kidneys by allowing the bile to escape freely is also of importance, as they are thus enabled to perform their function more freely in relieving the system of septic and other materials." In the paper referred to M. Terrier relates several cases with the utmost detail, especially interesting on account of the bacteriological examination of the discharge from the fistula at different dates, conclusively showing the gradual diminution in the virulence of the discharge after the drainage has been proceeding for some days, and pointing to the need of rather more prolonged drainage than some of us have been wont to employ—i.e., until a bacteriological examination of the discharge shows it to be sterile, or nearly so.

Ulceration.—Ulcers of the gall-bladder or bile-ducts vary greatly in number, size, and depth, and also in clinical importance. They may be quite superficial, being mere abrasions of the epithelial lining of the mucous membrane, then being as a rule numerous and widespread, or they may be single and deep, extending into or through the muscular and serous coats. Between these extremes every variety may be found. Although cholelithiasis is the most frequent, typhoid fever and cancer are quite common causes. Cholera and tubercle are said to produce ulceration of the bile passages, but I have been unable to find any specimens in illustration. The slighter cases of erosion are seldom seen, though doubtless they frequently exist in cases operated on for gall-stones, and in others where the concretions are passed naturally, but the severer forms of ulceration are more frequently met with as the immediate cause of death. Ulceration is chiefly of importance on account of the serious sequelæ—stricture, perforation, fistula, peritonitis (local or general), hæmorrhage, septicæmia, and pyæmia. The inflammation accompanying ulceration usually extends to the peritoneal coat at the site of the ulcer and leads to a plastic peritonitis, which causes the adjoining organs to adhere to the inflamed surface; thus in the greater number of cases keeping the peritonitis local. Some years ago I pointed out that in nearly every case of gall-stones there are adhesions of the gall-bladder or ducts to neighbouring organs showing that peritonitis is a frequent or nearly constant accompaniment of cholelithiasis. It is doubtless a salutary phenomenon, as otherwise general peritonitis would be much more common, especially in the many cases where the adhesions permit of fistulæ quietly

[22] Netter and Martin, Archives de Physiologie, vol. ix., 1886.

forming between the contiguous viscera and where localised abscesses form without general peritonitis. The adhesions may, either by the anchoring of normally mobile organs or by subsequent contraction, themselves become sources of inconvenience or danger; as in the case of a woman, aged thirty-four years, under my care, who, besides suffering from severe spasmodic pain due to chronic catarrhal cholecystitis, had dilatation of the stomach owing to kinking of the pylorus caused by adhesions passing between it and the gall-bladder. After separation of the adhesions and drainage of the gall-bladder complete recovery ensued. The peritonitis may, however, become general, either from perforation or by extension to the peritoneum through the non-perforated walls. Under such circumstances prompt surgical treatment will be required or death will speedily follow. With regard to hæmorrhage, as the ulcer extends the vessels usually become thrombosed, but occasionally severe hæmorrhage results, leading either to hæmatemesis or melæna. The notes of the following fatal case were furnished me by my friend Dr. Peter McGregor of Huddersfield. "A temperate man, aged forty-eight years, had suffered from gall-stone attacks since the age of twenty-six years, but for a year had had no seizure and had gained two stones in weight. Without pain or other localising sign he began to vomit blood, and continued to do so two or three times a day until his death, which resulted from exhaustion in the third week. A necropsy revealed contraction of the liver with numerous gall-stones in the gall-bladder. One, the size of a large filbert, had ulcerated through the walls of the gall-bladder and was projecting into the peritoneal cavity. There was no peritonitis, and death was due to hæmorrhage from the margin of the ulcerated opening." It is to be borne in mind that hæmorrhage is predisposed to in these cases by the aplastic condition of blood occurring in long-standing jaundice. As ulceration is always associated with the presence of pyogenic organisms, septic absorption frequently occurs, leading to constitutional disturbances in the shape of septicæmia and pyæmia. Although cancer may lead to ulceration it seems probable that long-standing ulceration of the gall-bladder or bile-ducts may predispose to malignant disease as they are so frequently associated.

Stricture.—Stricture of the bile-ducts is one of the rarer sequelæ of ulceration, by which it is probably always preceded, except in those cases dependent on malignant disease, which I do not propose to consider under this heading. Though there is no reason why stricture should not be a sequence of typhoid ulceration, such has yet to be proved, and the only cases with which I am acquainted, or concerning which I can glean information, have followed on cholelithiasis or new growth. Stricture may only render itself evident after the original cause has passed away, as in three cases of stricture of the cystic duct and one of the common duct, where I myself removed the cause in the shape of gall-stones, and subsequently had to treat the strictures which afterwards developed, and in another case of stricture of the common duct, where the history of gall-stones was indubitable, though none were found when the abdomen was explored. With regard to the symptoms, stricture, if in the cystic duct, leads to a gradual enlargement of the gall-bladder, which may be quite painless or which may give rise to considerable distress; if in the common duct jaundice supervenes, at first being only slight, but ultimately becoming severe, and being associated with all the usual distressing and dangerous symptoms of chronic icterus. The liver enlarges and may descend to the level of the umbilicus; the gall-bladder may also enlarge, though if gall-stones have been the cause the gall-bladder may have become contracted and so be incapable of distension. Stricture of the hepatic duct is probably extremely rare, for I can only find an account of one case. Needless to say, stricture of the bile passages will scarcely call for diagnosis apart from its cause, though different treatment will be demanded when the disease is recognised at the time of operation. In stricture of the cystic duct the gall-bladder should be removed, as either a recurrence of the symptoms will occur when the wound closes or there will be a permanent mucous fistula. As an alternative the gall-bladder may be short circuited into the intestine. In stricture of the common duct cholecystenterostomy must be performed, otherwise a permanent biliary fistula will certainly follow; at times, however, this may be impracticable, and in such cases drainage alone may be feasible.

Perforation of the gall-bladder and bile-duct.—Perforation of the gall-bladder or bile-ducts must always be serious on account of an escape of the visceral contents into the peritoneal cavity, the imminence of the danger, however, depending on two factors—first, the nature of the extravasated fluid, and, secondly, the time allowed to elapse before surgical relief is afforded. The presence of healthy bile in the peritoneum, as might occur from an injury such as a stab, a bullet wound, or a blow, in a healthy individual may be tolerated for some time without serious damage, as in a case recorded by Thiersch, who successfully removed over forty pints of bile from the abdominal cavity after the gall-bladder had been ruptured by a blow. The experiments of Schuppel and Bosbrom apparently prove that the peritoneum can absorb extravasated bile without serious trouble, and there have also been several cases reported, in which extravasated bile has been successfully evacuated, either by tapping or by incision and drainage. Such a fortunate result cannot, however, always be looked for, as is shown by the specimens in some of the museums. In all the cases where the history is appended the fact of the long survival after so serious an accident is at once borne home, and the lesson is manifest that operations would in each case have given good hopes of success.

Rupture of bile duct due to injury.—Mr. Battle has reported the case of a boy who had been run over by a cab. At first there were no definite signs of visceral injury; by the seventh day, however, he was deeply jaundiced, with symptoms of acute peritonitis. Abdominal section was done on the eighth day, and a large quantity of almost pure bile evacuated, but no injury to the bile apparatus could be detected. He died on the ninth day, and post mortem the liver and gall-bladder were found intact, but the common gall-bladder was found completely torn through. This is apparently the first recorded case of such an accident, but I found in Guy's Hospital museum a specimen from a case of Mr. Bryant's, where there is a laceration of the hepatic duct near its origin, in which death occurred from peritonitis after a week's illness, two pints of bile-stained fluid mixed with blood clots being found in the peritoneal cavity. Gunshot wounds of the gall-bladder are rare. Courvoisier has mentioned six cases, in two of which the patients died within a few hours, in a third in six weeks from pyæmia, and in a fourth from septicæmia. The case related by Hans Kehr is, therefore, of considerable interest, as immediate laparotomy with suture of a bullet wound in the gall-bladder of a man aged thirty years was followed by recovery. It is of far more serious moment when the extravasated bile is diseased, as it for the most part is where there is distension of the gall bladder or any disease of the bile ducts; for in such cases the bile is infective and rapidly sets up a diffuse peritonitis, which, unless speedily operated upon, ends fatally. Even in such cases if the diagnosis be made at once and early operation done the prognosis is good, as in the case of a patient, aged forty-five years, who had suffered from gall-stone seizures for twenty-nine years, and whom I saw with my friend and colleague, Dr. Braithwaite. After symptoms of inflammation in the hepatic region extending over several weeks he suddenly became worse and showed signs of general peritonitis. I opened the abdomen in the right linea semilunaris, several pints of bile and pus being evacuated. The abdomen was washed out and drainage-tubes were passed between the liver and diaphragm into the right kidney pouch, and downwards towards the pelvis, with the result that the patient recovered and is now in perfect health. One of the most remarkable cases of perforation of the gall-bladder following typhoid ulceration successfully treated by abdominal section is reported by Dr. Monier Williams and Mr. Marmaduke Sheild in THE LANCET of March 2nd, 1895. The case occurred in a married woman, aged thirty-one years, who was operated on on the fifty-first day of the disease, when the gall-bladder was found to be rigid, thickened, and of a dark plum colour, with a sharply circular ulcer the size of a threepenny-piece near its neck, the gall-bladder containing about one and a half ounces of thick offensive pus; the abdomen was washed out; the distended intestines were emptied by puncture, and gauze packing with drainage adopted, the result being a complete cure. In cases of rupture of the gall-bladder from sudden pressure induced by straining at stool, by vomiting, sneezing, efforts in parturition, and even by blows over the hepatic region, there is in all probability in the greater number of such cases a predisposition to rupture in the shape of

thinning by ulceration or by long-continued distension; otherwise the accident would be much more common. Such cases show conclusively to my mind that it is folly to permit patients with distended gall-bladders, even though symptoms be only occasionally present, to go unoperated on. I know of several such cases where patients are living in a "fool's paradise" owing to such unsound advice. A careful operation in these cases is almost devoid of risk, but rupture is hazardous in the extreme. Massage in cases of distended gall-bladder I look on as the height of folly, though it has been advised by those who should know better. Attempts to force impacted calculi onward by pressure are well calculated to rupture the thinned wall of the gall-bladder or bile-ducts or to cause perforation through the base of an ulcer, leading to extravasation of germ-containing fluid into the general peritoneal cavity and probably to fatal peritonitis. In some cases the primary perforation may lead to the formation of a second cavity bounded by plastic lymph, which may again rupture and lead to a fatal peritonitis. The perforation of the gall-bladder may occur into adjoining parenchymatous organs, and on several occasions I have removed numbers of gall-stones from cavities in the liver produced by ulceration and perforation of the gall-bladder or bile-ducts and direct passage of the contents into the liver tissue. In such cases there are the usual signs of liver abscess following on the ordinary symptoms of gall-stones, which may have been present for years. If the ulceration and perforation occur from the common duct into the substance of the pancreas, acute pancreatitis may follow. If the ulceration advances towards the adjoining hollow viscera—stomach, duodenum, or colon—adhesions as a rule form and the perforation is effected quietly. In one case of this kind which I saw with Dr. Stewart, after a history of cholelithiasis followed by severe stomach symptoms, the gall-stones were vomited and complete recovery followed. In several cases I have seen large gall-stones ulcerate their way quietly into the intestine, only producing serious symptoms from mechanical intestinal obstruction. Rarely gall-stones have perforated into the pelvis of the right kidney, producing symptoms of renal calculus. Not infrequently the perforation may occur after adhesion to the parietal peritoneum, when the events described under simple empyema of a superficial abscess discharging gall-stones may follow. The symptoms of perforation of the bile passages are those of perforative peritonitis from other causes, but there will usually have been premonitory symptoms pointing to the origin of the disease. A sudden pain beneath the right ribs, often followed by collapse and usually succeeded by vomiting, general distension of the abdomen, and a rapid pulse form the prominent features of the disease. If the extravasation is extensive there will be signs of free fluid in the peritoneal cavity. Jaundice, if not present before the accident, usually comes on from absorption of biliary pigment by the peritoneum, and if the bowels can be moved the motions will usually be clay-coloured. If the case be not operated on, death will probably ensue within a few days from toxæmia and paralysis of the bowels, though in some of the cases I have quoted life was prolonged into the second or third week. As to treatment, in these cases medical treatment is useless, and giving opium for the relief of pain so disguises the symptoms that a fatal sense of security is given for a time, and when the mistake is discovered it is too late to operate. As soon as it is clearly made out that perforation has occurred, or even if it be suspected that such is the case, the abdomen should be opened in the right semilunar line. If pus and bile be found they should be rapidly wiped away with gauze or wool sponges, and if the extravasation has gone beyond the local area of disease the abdomen should be flushed with hot boracic lotion. The patient may be too ill to bear a prolonged operation, and if so free drainage, as in the case I have related, will probably do all that is necessary. In draining it may be borne in mind that the right kidney pouch forms a distinct peritoneal pocket, and that a drainage tube applied through a stab opening in the right loin affords a free exit for extravasated fluids coming from the neighbourhood of the gall-bladder. If the whole peritoneal cavity has been soiled a puncture above the pubes large enough for a tube to be passed into Douglas's pouch may be an advantage. If the patient be in sufficiently good condition to permit a search for the rupture, and it can be found, it may be closed by fine silk or catgut sutures, but as a rule it will be wise to open and drain the gall-bladder at the same time. Should marked cholecystitis be found the question of cholecystectomy may be worth considering, but when the patient is in a critical condition it is a mistake to attempt too much; and as a rule cleansing and free drainage will be all that are necessary or advisable at the time, the removal of the cause being left until the patient is better able to bear a prolonged operation.

The Ingleby Lectures

ON

THE OPERATIVE TREATMENT OF CANCER OF THE BREAST.

Delivered at Mason College, Birmingham, on May 19th and 26th,

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LECTURE II.[1]

Delivered on May 26th.

GENTLEMEN,—I shall now proceed to consider the results which have been obtained from this method of operating, adopting Volkmann's three years limit as the standard of a cure for comparison with former methods. This means that the patient shall have had a full period of three years or longer after operation without local or internal recurrrence. Experience shows that the prospect of permanent immunity is then considerable. At the same time I do not accept this—or, indeed, any other period—as at all absolute, owing to the way in which minute deposits may temporarily remain quiescent and latent. I have seen external recurrence after an interval of eleven years, and not infrequently a patient dies from the disease five, six, or more years after operation, though in these cases I think some sign might have been detected within the three years limit. However, in this limited and provisional sense, I accept it as a cure. Then a distinction is to be drawn between local external recurrence and internal metastatic deposit as evidence of completeness of operation. The efficiency of the operation is more correctly measured by freedom from local recurrence than internal deposit, as the former is evidence that the operative limits were reached and nothing further could have been done. Moreover, it is supposed that cases are taken without special selection so long as they are operable. I believe the following is an exposition of the best work which has been done in the treatment of cancer of the breast on the lines of the radical operation described. The following table shows the recently published returns of three operators:—

TABLE A.—*Cases operated on by the Radical Method and observed for at least three years.*

Surgeon.	No. of cases.	No local recurrence.		Local recurrence.	Percentage of cures.	Date.
		Cured.	Died.			
Rotter	10	6	2	2	60·0	1896
Helferich	35	10	11	14	30·5	1896
Watson Cheyne ...	21	12	4	5	57·0	1896
Total	66	28	17	21	42·1	—

Percentage of cures (average) 42·1; percentage with no local recurrence 68; operative mortality 0.

Von Bergmann does a bold operation on ordinary lines, removing the breast widely with the paramammary tissues, systematically clearing the axilla, and in some cases removes the sternal portion of the pectoralis major. His latest statistics, however, do not come down later than 1885, when he was less careful about clearing the fascia, &c., than now, and I have not included them in this table. Rotter (Berlin) does a wide operation. He removes the whole of the pectoralis major and the pectoralis minor. He also removes the

[1] Lecture I. appeared in THE LANCET, May 22nd, 1897.

clavicular part of the major when the infra-clavicular glands are enlarged. In some cases he removes the supra-clavicular glands, but does not resect the clavicle. Helferich (Griefswald) does a similar operation, but without removing the pectoralis minor. Watson Cheyne does a wide, clean operation on ordinary lines, occasionally removing the sternal portion of the pectoralis major. He does not ordinarily remove the supra-clavicular glands. His results seem to be the best recorded, viz., 21 cases with 12 cures—57 per cent.

TABLE B.—*Statistics showing Gradual Improvement in Results.*

Operator.	Date.	Percentage of cures.
Billroth	1876	4·7
Esmarch	1876	11·8
Volkmann	1880	17·8
Kuster	1885	21·0
Konig	1885	23·0
Von Bergmann	1885	32·0
Average of Rotter, Helferich, and Watson Cheyne	1896	42·5

Looking to my own results I have seen that the effect of thorough removal is very marked indeed. I find it almost impossible to present these in a complete tabular form principally owing to the difficulty of tracing the hospital patients. I commenced to clear out the axilla as an addition to the ordinary operation in selected cases about 1887. These earlier ones, though not available in statisticial form, were of great value to me, and were largely instrumental in forming my opinion. Thus a woman whose breast and axilla I cleared in May, 1888, for a small scirrhous tumour, microscopically verified, is now alive and perfectly well. Another, operated on in April, 1889, in the same way is perfectly well to-day.

From the commencement of 1891 I have cleared out the axilla in every case of cancer that I have operated on with one exception, viz., a very feeble old lady, aged seventy years, with a small hard scirrhous nodule who presented anæsthetic difficulties. This has been the only exception. Since that date I have performed the complete operation more or less perfectly on seventy-eight patients, forty-four in private practice, and thirty-four in hospital. The ages ranged from twenty-eight to seventy-five years. There was not one death from operation, nor one even seriously ill so as to give anxiety. It is right to say that I have had one death from breast excision for a simple tumour, due to acute septic infiltration in hospital. I have found it impossible to trace the subsequent histories of a sufficient number of the hospital cases dated three years back to make them of any value for statistical purposes so they must be put aside altogether. Of the forty-four private cases I have a report up to date in every one. These cases are divisible into two periods, the first prior to May, 1894, and the second subsequent to that date. Those in the first group only are available for the three years limit, and they are 20 in number. Of these 7 are now alive and free from any sign of the disease, 11 have died from it, and 2 are alive, but show signs. Of the 13 in whom the disease has re-appeared it was solely internal in 7. I should state that this epoch contained an unusual proportion of bad cases, of complete failures and very early recurrences. I have no doubt the 24 in the second epoch will show much better results. In the first place I have continuously improved upon my method of operating, particularly in respect of wider removal of muscle and paramammary tissue. Then the selection of cases was more careful and judicious. Thus of 9 operations (private) in 1896 only 1 shows any sign of re-appearance, of 7 in 1895, 1 died within eight months, and 1 shows signs of internal deposit. All the others are quite well.

The advantages which have followed thorough and systematic operations are, I think, sufficiently apparent, and have fully established their superiority over the older methods. An important dissentient is to be noted in Mr. Frederick Treves, who considers that practically the results are no better than by the older methods while being more tedious and dangerous, but as he allows an average mortality of 5 per cent. for these older ones, and an average re-appearance within twenty months, it is clear that he does not do justice to the possibilities of the newer method while he considerably exaggerates its dangers and drawbacks, its average mortality being below 5 per cent., and immunity from return far more than twenty months.

I think it is more difficult to decide upon the merits of some of the more extensive operations which have recently been introduced, especially by our Transatlantic brethren. Halstead and Meyer do not consider the operation complete unless it includes also the whole of both pectoral muscles, every trace of fatty and connective tissue in the axilla and sub-pectoral region, and the supra-clavicular glands in the posterior triangle of the neck. Halstead's operation is rather startling in its extent and magnitude. The technique is not quite easy to understand, but it is fully explained in his article in the "Annals of Surgery,"[2] and also described by Jacobson in the last edition of his admirable work on "Operative Surgery." Suffice it to say that Halstead encircles the breast by a very wide incision which is carried below the clavicle on to the arm. A flap of skin is reflected down from the axilla and chest-wall, and is subsequently slid up to form a lining for the fornix of the axilla. Another incision bisecting the main one is carried over the clavicle to the neck and the flaps of skin are reflected. Both pectoral muscles are detached from the ribs and clavicle and the humerus and the cleaning of the axillary contents is commenced and carried from above downwards. The whole of the tissues are dissected away with scrupulous care, not a trace being left behind, and the whole mass is removed in one piece so that cancerous tissue is never cut into. He now also adds to this a dissection of the supra-clavicular glands from the posterior triangle of the neck. It is described as a bloodless operation, as many as 100 or more ligatures being required, and the time occupied is said to be three or four hours. He claims for it but little shock, as he allows no loss of blood, and as he has done it fifty-one times without a death he is entitled to do this. Halstead distinguishes between local and regionary recurrence. By the former he means return of the disease in the field of operation, in the scar, or in the glands above the clavicle. By regionary recurrence he means skin metastasis at a distance from the scar, and which he believes appear as independent formation being against the lymph current. The distinction, however, cannot well be maintained and seems superfluous. Of his 51 operations Halstead claims that there has been true local recurrence only in 3, but 8 have shown regionary recurrence, or 11 in all. In 5 the result was not known. The remainder, 34 in number, showed no external recurrence. Of these 10 had died presumably from internal metastasis, so that 24 or 50 per cent. may be considered as cured. The weak point in these statistics is that they are not based upon the three years or any limit—in fact, it does not appear that the three years' limit has been passed in more than three or four of them, a large number being within a few months of the publication. In any case they do not show better results than by the ordinary complete operation such as Watson Cheyne's. It is clear that in both cases the majority that die do so from internal metastasis without local recurrence. The operation seems to be one which may well be reserved for advanced cases where the muscles are infiltrated and the infra-scapular and cervical glands are enlarged, if, indeed, it is thought advisable to touch such cases at all. I believe it was not Halstead's intention to publish any more results till the three years had passed, so that a further and more valuable record should shortly be due.

Meyer's operation goes even further. He makes the usual oval incisions on a wide scale and bisects the upper by a vertical one carried up over the clavicle to the neck. The integumental flaps are dissected well back. Both the pectoral muscles are then removed entire, commencing at the humeral attachment of the major and throwing both inwards. These with all the infra-clavicular and axillary fat and lymphatics are carefully cleaned away with the knife absolutely and continuously working round the seat of disease, and never trespassing even on the belly of the muscle. The supra-clavicular glands are also dissected out of the posterior triangle of the neck through the vertical incision. Any defect of skin is made up by grafting in eight or ten days. This operation, he claims, adds only twenty minutes to the ordinary one, and the disability afterwards is not great. At the time of publication he appears to have done it only in one case, a few months previously, so that no

[2] Annals of Surgery, vol. xx., 1894.

opinion can be formed of its special merits. Further than this it is scarcely possible to go without amputating the entire upper extremity with the shoulder girdle. I believe this has been done a few times, though with indifferent success. It is clearly inadmissable, and can only be condemned as a dangerous and useless mutilation without corresponding advantage. Then at least one operator has removed the sternal glands from within the chest, a procedure which is not likely to be frequently followed. Heidenhain also includes the periosteum in stripping the muscles from their bony attachments.

There is diversity of view as to the treatment of the supra-clavicular glands. This is certainly our weakest point, and the most common seat of external recurrence, just as the axilla used to be. My own opinion is that if enlarged glands can be felt above the clavicle there is no hope of cure and the case is not suitable for operation. It is to be noted that these supra-clavicular growths often appear to grow very slowly, and that owing to the roomy space and fat in which they lie a long time may elapse before they show any sign of enlarging. Consequently by the time this has taken place the chain of glands beyond them, which is close to the lymphatic duct and passes into the chest, will be extensively infected, and the disease will have passed into a region where it cannot be followed. How far it should be carried as an addition to the ordinary operation is as yet somewhat doubtful. To clear out the posterior triangle of the neck means a considerable addition to the operation and is frequently unnecessary. If, however, it is found during the operation that the highest axillary glands are infected it is clearly necessary to follow them into the neck, unless the case is to be forthwith abandoned as hopeless. There is then a reasonable prospect of getting beyond the limits of the disease. It is not considered that divison or resection of the clavicle materially helps the exposure and removal.

I think it is very doubtful whether some of these more extensive operative procedures confer any additional immunity from recurrence at all commensurate with their severity. It is clear that in both classes of operation the majority of the fatal cases die from the internal metastasis without external recurrence, and against internal metatasis no operation can protect. It is very certain that but little good can result from these extensive measures if there exists some deep-seated nidus of infection which is beyond the reach of the knife. That such a source of infection exists is in many cases only too certain, though not apparent. Herbert Snow finds it in the bone marrow. He claims that this is the great obstacle to radical cure in breast cancer. This infection, he states, takes place in all ordinary cases within six months of the inception of the disease. The typical indication is a prominence of the sternum, though there may not be any more visible evidence for many years, the disease remaining quiet and latent. There is considerable force in his views, though probably much too sweeping. I have on several occasions recognised this enlargement of the sternum as an unfavourable prognostic sign, indicating bone infection.

So far there is no conclusive evidence that any corresponding advantage accrues from some of the more recent developments of the operation, and I am of opinion that the utmost benefit of which it is capable may be conferred in a large majority of cases by the one I have described as the standard. The cases for which this will not suffice are probably unsuited for operation. At the same time, final judgment must be suspended till we receive further reports of these procedures.

The clinical varieties of cancer of the breast vary, as is well known, within wide limits, and appear to me to depend very much on the age, habit of body, and constitution of individual patients. At one extreme is the large, soft, rapidly growing and vascular tumour known as medullary cancer, which occurs in robust, healthy young women, and in stout women of more mature years. These cases are most unfavourable for operation and, except in their earliest stages, are quite unsuitable. They furnish a large proportion of the early recurrences and failures, as the disease sometimes re-appears before the healing of the wound and spreads with great rapidity. Of all the unfavourably modifying conditions I think rapidity of growth is the worst. The actual duration is by no means the only criterion of the stage of the disease. A large tumour of the tuberous forms, of slow growth and unattached, has a much more favourable prognosis than an infiltrating medullary one in its earliest stages. At the other extreme is the small chronic dry infiltration of shrivelled and aged women, though not confined to old women. Opinions differ as to the propriety of operating in atrophic cancer. In my own opinion, it is a question of the stage of the disease. In an early stage they are the most favourable of all and should certainly be removed. Later, when there is any notable skin infiltration or attachment to the muscles, the most radical operation is not only ineffectual, but harmful. It is not only that an early re-appearance may be expected, but the type of the disease is thereby changed and the recurrent malady may run its course in as many months as it would have occupied years if undisturbed. I have known a case extend over thirteen years of fairly comfortable life. Atrophic cancer has a remarkable faculty of attaching itself to surrounding parts, and of reproducing fibroid indurations in its recurrences, both regionary and metastatic.

On Paget's disease.—I have had four cases of this peculiar cancerous dermatitis of the nipple. I should advise immediate operation in every case of chronic eczema or ulcer of the nipple, even though no tumour is perceptible, as the relationship between this and cancer is constant. In all my cases the ulceration preceded the tumour by several years. In two of them the tumour was limited to the nipple, and of the kind known as duct cancer, and preceded by a bloody discharge from the nipple—a symptom of very grave significance.

On secondary operation.—Secondary operations are advisable only when the growths are small, solitary, and freely movable. I think these operable cases generally imply an imperfect primary operation, and should get rarer as we make this more efficient. In two of my cases only have I thought it advisable to remove recurrent nodules by secondary operation, and in neither was the result very satisfactory, as general infiltration soon showed itself. I have seen but one case, and that in the practice of a predecessor, which was greatly benefited by repeated operations, two small nodules being removed from the scar at intervals of four and three years respectively.

On the complete operation.—All cases should be subjected to the complete operation even in their earliest stages. Except as a palliative in a few rare cases and for benign tumours the incomplete operation—that is, of the breast alone—should be abandoned. The additional risk to life is scarcely appreciable, and the advantage of clearing the axilla, the next resting place of the disease, is obvious. After incomplete operations re-appearance takes place in at least 80 per cent. within six months. Even as a palliative the complete operation is much more effective, in particular in preventing that very distressing feature, œdema of the upper extremity. It is occasionally necessary to perform a palliative operation on a patient past hope of cure for the sake of the moral effect. To some women the verdict "too late" comes as a crushing blow, and it is more humane to yield to their request if this can be done with any prospect of relief. For instance, we may get rid of a foul and bleeding ulcer while the patient's spirits are maintained by hopefulness.

On the limits of the operation for cure and non-operable cases.—A judicious and careful selection of cases should be exercised and involves consideration of the constitutional state of the patient as well as the local conditions. Among non-operable cases I class: (1) large medullary cancers; (2) scattered tubercles in the skin and œdema; (3) internal metastasis of all kinds; and (4) œdema and solid enlargement of the upper limb. This I regard as an emphatic "Noli me tangere" and contra-indication. This waxy œdema is one of the most distressing features of the disease. I am sorry to say I know no means of relieving it. I have tried puncture, but it is worthless. Amputation at the shoulder girdle has been practised on a few occasions, and I have been asked by patients to do this; but even this heroic remedy does not arrest the progress. Among debatable cases I include:—1. Enlargement of supra-clavicular glands. I have hitherto regarded this as an absolute contra-indication, but I am inclined now to extend the field of operation to some of these cases. I would limit it, however, to small and movable tumours or to the condition I previously indicated of the highest axillary gland being found infected. Fixed and painful enlargements, with œdema of the limb, should not be touched. Before long we may expect some further evidence of the merit of this addition to the operation, as it is being extensively practised by some surgeons. 2. Cancer in both breasts. The appearance of the disease in the other breast is now commonly regarded as a late general infection

and not as an independent growth. It is explained by the free anastomosis and intersection between the lymphatics of the two breasts. It is rarely desirable to operate, but Jacobson records a satisfactory case. The surgeon must consider the probabilities in each case with the interval that has elapsed and the conditions of the re-appearance. It happened in two of my patients. In one of them I operated on the second breast with unsatisfactory results. In the other I did not operate on the second breast; the disease reappeared in this case two years after removal of the first, and, very curiously, it was preceded by enlargement of the axillary glands on the corresponding side.

Diagnosis.—The importance of early operation, obvious as it is, cannot be too strongly enforced. It is unfortunate that the disease is frequently so insidious in its onset that considerable advance has been made before the patient is aware of its existence. Another great hindrance to early operation is the difficulty of diagnosis in the incipient stages. The first care should be to place the patient in favourable circumstances for the examination. The chest should be quite undressed, so as to admit of easy examination of the pectoral region and axilla as well as of both breasts. In a matter of this urgency and importance accuracy of diagnosis should be subsidiary to promptitude in treatment, as there are cases in which it is impossible to be accurate without exploratory incision. The two conditions which give the greatest trouble are chronic inflammatory hyperplasia, and the case of a tense cyst situated deeply in the breast. The latter is distinguished by its mobility, globular outline, and verified by the exploring needle, which should never be overlooked as an aid to diagnosis. Chronic mastitis is often much more difficult to discriminate, and some experience in handling and exploring these indurations is needed. Students are taught to recognise cancer by the well-known evidences in a developed stage, when the malignant characters are patent to observation; and we are all more or less under the influence of these teachings. In the simple disease which often follows lactation or weaning the thickening is sensitive to the touch, firm, and elastic, but the outlines are more diffused than in cancer. On pressing the mass against the chest wall the induration and sense of tumour disappear. Then, again, the area of breast occupied is more diffuse and larger, or both breasts may be similarly affected. The same sort of dimpling of the skin may occur as in cancer, but this is quickly followed by fluctuation and suppuration.

It is prudent to come to a decision at the first interview—that is to say, if the surgeon is unable to convince himself of the non-malignant nature of the neoplasm it is better to take action at once. I deprecate the practice of keeping cases under prolonged observation to see how they will develop. Patients either get restive and will not consent to remain long in doubt, or, what is more common, if told to report themselves in a month they turn up in six months, when the mischief is done. Moreover, the sequel in about five cases out of six shows the delay to have been unwise.

A very important question arises as to the existence of any direct etiological relationship between chronic mastitis and cancer. It is generally assumed that such a relationship exists, that chronic hyperphasia is likely to become cancer, but the stages of development from this supposed pre-cancerous state have not been traced. There seems distinct clinical proof that cancer may be grafted on to it if prolonged. I believe this did take place in the case of one of my patients. This woman, aged forty-eight years, had chronic mastitis, and after an interval of three and a half years from its first incidence a small scirrhous nodule appeared on the site. This made me regret being too precise and nice in my diagnosis. There can be no doubt that before proceeding to do one of these wide operations we must first positively satisfy ourselves that the disease is malignant. In a large proportion—too many, indeed—this is only too obvious. In doubtful cases a preliminary exploratory incision is to be made, and precaution is to be taken against auto-infection. The knife should be changed and the hands of the operator as well as the surface of the breast washed and the incision plugged with sterile gauze. Can we rely upon the naked eye appearance of the cut surface? I think so. The fresh cut section of cancer is unmistakeable, quite different from the leathery toughness of chronic mammitis. Some contend that the surgeon, if not an experienced pathologist himself, should always be accompanied by one with his freezing microtome. This, however, is a luxury which cannot always be had, unless he is to be an official provided at State expense, as suggested in America. One is very glad of the opinion of a skilled pathologist, but in case of a conflict of opinion the responsibility of deciding and acting would remain with the operator.

In closing, let me summarise by saying that so far as is at present known our only hope of advancement lies in the direction of more thorough and more early operation. The limit of what is possible in the former direction will soon be, if it is not already, reached. The result must carry conviction that we may hopefully anticipate a real cure in at least 30 or 40 per cent. or, some would say, 50 per cent. of our cases. I would not like to place 30 per cent. as a limit, but it is with somewhat chastened hope that I look for anything beyond. Longer observation is required, particularly as to the future development of those cases which pass the three years limit. Even now, however, the operation in too many cases is not practised to the best advantage and is not used for all it is worth. Certainly some of the disrepute and prejudice which have surrounded it may fairly be ascribed to the incomplete and inadequate manner in which it is too often done by men who have had no proper surgical training, and whose ill results serve to injure the cause as a whole, and to reflect prejudicially on the work of others. The fact is it has been everyone's operation because it is thought to be easy, but now that surgery is specialised to such an extent these easy happy-go-lucky methods should be abolished in this as in other branches of surgery.

In respect to the second point—more early operation—much has yet to be accomplished. I think, however, that I observe some improvement in this direction and that we now operate at a somewhat earlier average stage than was customary fifteen or twenty years ago. I gladly testify to the alertness of the profession in this respect. When undue delay occurs it is usually the fault of the patient who has concealed it from herself, her friends, and her medical attendant till too late. For this the well known want of success of the operation is partly responsible. If we can show better results women will probably be less reluctant to undergo treatment. I think in lay circles as well as medical there is an increasing recognition of the value of early and complete operation as offering the only hope of cure. For the present all pretensions to influence the course of the disease by other measures seem to have subsided, and one after another the worthless cancer cures have ceased to distract the public mind.

In thanking you for your kind attention I am too well aware that I have added nothing of novelty or weight to what has already been better said by others, but I hope some service may have been done by showing that the operation deserves more careful study and attention than it commonly receives. British surgery has been rather lax in its treatment of breast cancer, and in particular in our own district I think we have much leeway to make up.

TYPHOID SERUM REACTION.

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ALTHOUGH the typhoid serum reaction has been very generally viewed with favour by most observers as a test for enteric fever, some do not consider it to be of such value. There seems to be a tendency on the part of nearly all to admit that the reaction must be accepted with certain reservations, particularly when a negative result is obtained. It was in order to study the conditions which may be responsible for the different and somewhat anomalous results that I began a series of observations, during the course of which I have examined the sera of sixty different subjects. A brief *résumé* of the methods and conclusions of some of the different observers will help to explain why I adopted a particular technique.

Grünbaum,[1] who appears to have been the first to study

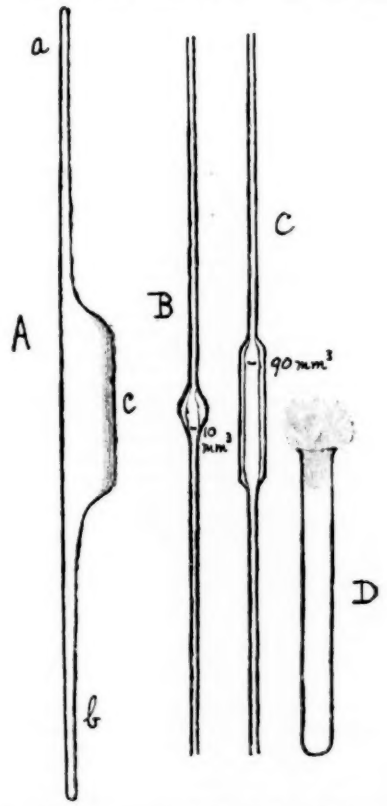
[1] THE LANCET, Sept. 19th and Dec. 19th, 1896.

the question systematically, uses serum which he dilutes with broth in strengths varying from 1 in 4 to 1 in 32. He considers that the test is of value when a positive reaction is obtained within a definite time; he adopts the half-hour time limit which was suggested by Gruber and Durham. Durham,[2] who uses a similar technique, failed to get a reaction in three undoubted cases of enterica as late as the sixteenth day of illness. He looks upon the reaction with favour if a positive result is obtained, but does not consider a negative result to be of much value. Widal[3] dilutes the serum with nine times (approximately) the amount of an actual broth culture of the bacillus, and makes observations as long as twenty-four hours after the mixing. He—with Catrin, Chantemesse, and Sicard, who adopt his methods—views the test with great favour, although he has found that a 50 per cent. serum from a normal person may give a positive reaction. Wyatt Johnston and MacTaggart,[4] who use dried blood subsequently diluted with water, constantly use the reaction as a test for enteric fever. Block,[5] Biggs, and Park[6] use diluted serum and, with certain reservations, think the test is of value. Von Jez,[7] who uses twenty drops of serum in 10 c.c. of broth and makes observations during as long a period as twenty-four hours, maintains that the reaction is not characteristic of enteric serum and has no specificity. The differences in the results obtained by these observers appear to bear some relation to the differences in technique, and until some generally accepted dilution and "reaction time" are adopted, different results will continue to be obtained.

Regarding the dilution, Widal and others dilute the serum with the actual broth cultivation of the bacillus typhi abdominalis. There is the objection to this method that the first portions of the serum which come into contact with the bacilli may be as strong as from 80 per cent. to 50 per cent. As, therefore, the serum of some normal people will give a decided and quick reaction, possible fallacies may occur. Wyatt-Johnston, moistening the dried blood with water, is quite unable to determine the amount of the dilution. He uses a small dilution and speaks of "partial reaction." Although this method has been attended with consistent results in his hands, other observers have not obtained such good results. Biggs and Park raise another objection to the method—viz., the formation of what they term a "pseudo-reaction." Consistent results would hardly be expected from an observer like von Jez, who is content to "drop" the serum into a measured quantity of broth. The "reaction time," or interval during which the observations are continued, has been more variable even than the amount and method of dilution. Grünbaum limits the time to half an hour, whilst Widal, von Jez, and others limit it only to twenty-four hours.

Early in December, 1896, I began a series of observations upon this reaction. Having some of the results of previous observers before me, I decided to make a comparison of the effects of 5 per cent. and 50 per cent. serum upon the bacilli during the first half-hour and after twenty-four hours respectively. I also made observations regarding the delicacy of the reaction of 5 per cent. serum microscopically as compared with that of the same dilution macroscopically. The five columns of reactions in the table are therefore as follows:—Column I., 5 per cent. serum microscopically within half an hour; Column II., 5 per cent. serum microscopically at the end of twenty-four hours; Column III., 5 per cent. serum macroscopically at varying periods; Column IV., 50 per cent. serum microscopically within half an hour; and Column V., 50 per cent. serum microscopically at the end of twenty-four hours. The serum was taken from three classes of subjects: (1) those who were suffering from, or who had suffered from, enteric fever; (2) those suffering or convalescent from other diseases; and (3) normal people. I have taken every precaution I could to satisfy myself that all those in classes 2 and 3 had never suffered from any disease resembling enteric fever during their lives. All the normal people, and those who had enterica several years ago, were either medical men, members of their families, or nurses.

Collection of the blood.—Fig. A of the diagram represents the pipette I have used throughout, with the blood-clot (darkly shaded) in the barrel, and the serum (lightly shaded) collected in the lower end. The shape is sufficiently indicated in the diagram. The diameter of the barrel—i.e., the tubing from which it is made—is about half an inch; the pipette ends are fine, but not of capillary dimensions, and are not sealed before use; the total length is five inches. Several are made at one time, put into seven inch test-tubes and sterilised in the usual manner. The lobe of the ear is cleaned with lysol, or other antiseptic; this is washed off with alcohol which is allowed to evaporate. The lobe is pricked with a sharp hare-lip pin or bayonet-pointed needle, and the ear gently squeezed. As the blood issues the end (*a*) of the pipette is held to the drop whilst the other end is depressed; the blood will now run down without any suction. When four or five drops, which is quite sufficient, have been collected the



mouth is applied to the end (*b*) of the pipette and very gentle suction exerted, the side (*c*) of the barrel being dependent. If the suction is gentle the blood will run into the barrel and will remain in a layer at the bottom without the formation of bubbles. If the suction is too great, or the diameter of the barrel too small, a bubble will probably form across the barrel, in which event the amount of available serum is diminished. The open ends are now quickly sealed and the pipette rested on a tumbler or other convenient stand, so that the part (*c*) is dependent. In this position it is allowed to remain until the blood is perfectly coagulated; from twenty minutes to half an hour is generally necessary. The pipette is then replaced in the test-tube and fixed in a vertical position. After a few hours the serum will be found free from corpuscles in the lower end.

I consider that the ear as a source of blood is in every way preferable to the finger. As much, if not more, blood can be abstracted without causing any pain. Several of my cases were small children and not one of them cried during the operation, although on a few occasions I had to squeeze the ear well, owing to the small size of the lobe. One of the chief advantages which Wyatt-Johnston claims

[2] THE LANCET, Dec. 19th, 1896.
[3] La Semaine Médicale, July, 1896.
[4] Montreal Medical Journal, vol. xxv.
[5] Johns Hopkins Hospital Bulletin, November, 1896.
[6] American Journal of the Medical Sciences, March, 1897.
[7] Wiener Medicinische Wochenschrift, January, 1897.

TABLE OF REACTIONS.

No.	Date of observation.	Lapse of time since onset of disease.	Reaction. (I.) 5 per cent. serum microscopically within half hour.	(II.) 5 per cent. serum after twenty-four hours.	(III.) 5 per cent. macroscopic.	(IV.) 50 per cent. serum microscopically within half hour.	(V.) 50 per cent. serum after twenty-four hours.	Remarks.
1	Feb. 18th, 1897	5 days	+	—	+	=	—	Enteric fever. Urine gives Erlich's re-action.
2	Dec. 23rd, 1896	6 ,,	0	—	0	0	—	,, ,,
	Jan. 2nd, 1897	16 ,,	+	—	+	=	—	,, ,,
3	March 30th, 1897	14 ,,	=	—	+	=	—	,, ,,
4	Feb. 18th, 1897	16 ,,	+	—	+	=	—	,, ,,
5	Jan. 25th, 1897	17 ,,	+	—	+	=	—	,, ,,
6	Feb. 24th, 1897	3 weeks	=	—	+	=	—	,,
7	Dec. 23rd, 1896	4 ,,	+	—	+	—	—	,,
8	Dec. 23rd, 1896	4 ,,	+	—	+	=	—	,,
9	Dec. 16th, 1896	5 ,,	+	—	+	—	—	,,
10	March 24th, 1897	5 ,,	+	+	—	=	—	,, One relapse.
11	Dec. 16th, 1896	5 ,,	+	—	+	=	—	,,
12	March 24th, 1897	6 ,,	+	+	+	=	+	,,
13	Jan. 6th, 1897	6 ,,	=	—	+	=	—	,,
14	Jan. 6th, 1897	8 ,,	=	—	+	=	—	,, Convalescent.
15	March 26th, 1897	8 ,,	=	+	+	=	+	,, Prolonged attack, no relapse.
16	March 24th, 1897	8 ,,	=	—	+	=	—	,, Convalescent.
17	Dec. 16th, 1896	10 ,,	=	—	+	—	—	,, ,,
18	Dec. 31st, 1896	14 ,,	+	—	+	—	—	,, One relapse, convalescent.
19	Jan. 26th, 1897	1 year	=	+	+	=	+	,,
20	Jan. 24th, 1897	2 ,,	+	+	+	=	+	,,
21	March 26th, 1897	$3\frac{6}{12}$,,	0	0	0	+	—	,,
22	Feb. 3rd, 1897	$3\frac{7}{12}$,,	0	0	0	+	—	,,
23	Feb. 3rd, 1897	$3\frac{9}{12}$,,	0	0	0	+	—	,,
24	Dec. 18th, 1896	6 ,,	+	—	+	—	—	,, One relapse.
25	Jan. 24th, 1897	6 ,,	=	+	+	=	—	,, Two relapses.
26	Dec. 20th, 1896	8 ,,	0	—	0	+	—	,, has phthisis now.
27	Dec. 31st, 1896	18 ,,	0	—	0	—	—	,, Two relapses.
28	Feb. 10th, 1897	20 ,,	0	0	0	0	—	,,
29	Feb. 10th, 1897	24 ,,	0	0	0	0	0	,, convalescent from diphtheria.
30	Jan. 26th, 1897	30 ,,	0	0	0	+	—	,,
31	Dec. 18th, 1896	—	0	—	0	—	—	Normal subject.
32	Dec. 18th, 1896	—	0	—	0	0	—	,,
33	Feb. 3rd, 1897	—	0	0	0	+	—	,,
34	Feb. 3rd, 1897	—	0	0	0	0	0	,,
35	Feb. 4th, 1897	—	0	0	0	0	+	,,
36	March 30th, 1897	—	0	+	0	+	+	,,
37	March 30th, 1897	—	0	0	0	0	0	,,
38	March 30th, 1897	—	0	0	0	+	+	,,
39	Dec. 26th, 1896	8 weeks	0	—	0	0	—	Appendicitis, convalescent.
40	March 14th, 1897	4 ,,	0	0	0	0	0	Colitis.
41	March 24th, 1897	3 ,,	0	0	0	0	0	Pneumonia.
42	March 14th, 1897	4 ,,	0	0	0	+	+	Influenza, bronchitis.
43	Jan. 25th, 1897	4 ,,	0	—	0	+	—	Pyrexia.
44	Jan. 25th, 1897	4 ,,	0	—	0	0	—	Influenza.
45	Jan. 25th, 1897	—	0	+	0	0	+	Purpura hæmorrhagica.
46	Feb. 14th, 1897	14 days	0	0	0	0	0	Scarlet fever, convalescent.
47	March 17th, 1897	5 weeks	0	0	0	+	+	,, ,,
48	March 17th, 1897	4 ,,	0	0	0	0	0	,, ,,
49	Feb. 14th, 1897	6 ,,	0	0	0	+	+	,, ,,
50	Feb. 14th, 1897	6 ,,	0	0	0	0	0	,, adenitis, convalescent.
51	Feb. 14th, 1897	5 ,,	0	0	0	0	0	,, ,, ,,
52	March 17th, 1897	10 ,,	0	0	0	+	+	,, ,, ,,
53	March 17th, 1897	6 ,,	0	0	0	0	+	,, ,, ,,
54	March 18th, 1897	2 ,,	0	0	0	+	+	,, ,, ,,
55	March 17th, 1897	3 ,,	0	—	0	=	—	,, tonsillitis ,,
56	March 15th, 1897	10 days		0	0	0	0	,, sloughing throat, convalescent.
57	Feb. 15th, 1897	5 weeks	0	0	0	0	0	,, chicken-pox ,,
58	March 23th, 1897	14 days	0	0	0	+	+	,, diphtheria, broncho-pneumonia.
59	March 26th, 1897	17 ,,	0	0	0	0	0	,, ,, otorrhœa.
60	March 26th, 1897	3 weeks	—	—	—	0	0	,, ,, measles, broncho-pneumonia.

+ signifies gives a reaction; = signifies reaction in less than two minutes; and 0 signifies no reaction.

for his method is that no skill is required for the collection of the blood. As it might have been urged that my method required a certain amount of skill or previous experience, I gave my pipettes to several medical men who had never collected blood for examination, together with an account of the method of collection which I have detailed above, and in every case I have had the pipette returned to me with the blood collected excellently. I consider that the method is easier because the ends are cut off square, instead of having to be broken off with sterile forceps, as is the case when the ends are sealed.

Dilution of the serum.—In order to dilute the serum I have used two capillary pipettes, represented by B and C in the diagram (B is graduated at 10 mm.^{3} and C at 90 mm.^{3}), and a small test-tube three-eighths of an inch in diameter and two inches long, similar to those used by Durham.[8] The end (*b*) of the blood pipette is filed and broken off just above the level of the serum. The end of the pipette B is inserted into the open end, and 10 mm.^{3} of the serum are drawn up into it. (If the calibre of the pipette B is not sufficiently small to allow this, the bottom end of the serum-containing tube is broken off and the serum is allowed to run into the pipette by capillary attraction.) The 10 mm.^{3} of serum are now introduced into the test-tube D and 90 mm.^{3} of sterile broth or salt solution are added by means of the pipette C and well mixed with it. In order to make the 5 per cent. dilution a loopful of this diluted serum is placed on a coverslip and the same loopful of an eighteen-hour broth culture of the bacillus typhi abdominalis is mixed with it. The coverslip is inverted on a hanging-drop slide and at once examined. To make the 50 per cent. dilution a loopful of the broth culture is placed on a coverslip and a drop (of equal size) of the serum is placed near it by means of the pipette B. The two drops are then well mixed, inverted on the hanging-drop slide, and examined. For the macroscopic sedimentation test 90 mm.^{3} of the broth culture are added to the diluted serum in the test-tube. Until Wright[9] published the account of his technique I had followed Durham's method and allowed the sedimentation to take place in the test-tube, but since that publication I have sucked the prepared emulsion from the test-tube into a sedimentation-tube after Wright's pattern. The massing and sedimentation are certainly more easily seen than in the test-tube and after a shorter interval. Even after adopting Wright's method I have not found that human serum, however well it reacts microscopically, will give such quick reactions as Durham[10] describes with the sera of artificially immunised animals. Wright's method of diluting I do not consider so desirable as that by means of capillary pipettes in a test-tube.

A glance at the table on p. 1461 shows several interesting facts. Cases 1 to 20 were either suffering from enteric fever or had suffered from the disease within two years. Of these all gave a reaction with 5 per cent. serum in less than half an hour except Case 2. As will be seen, I made two examinations of this patient—the first six days after the onset of the disease and the second sixteen days after the onset. At the first examination I got no reaction within half an hour. I was unfortunately not able to examine the slides after twenty-four hours, but there was no sign of reaction after the lapse of four hours with either the 5 per cent. or 50 per cent. serum. There was, however, no sign of sedimentation in the test-tube after twenty-four hours. Eleven days later, when I made a further examination, I obtained a marked reaction with the 5 per cent. serum within half an hour, and a reaction with 50 per cent. serum in less than two minutes. There was also a macroscopic reaction in three hours. Cases 21 to 30 had suffered from enteric fever from three and a half to thirty years previously to the examination. Cases 21, 22, and 23 gave no reaction with 5 per cent. serum even after twenty-four hours, but each gave the reaction with 50 per cent. serum within half an hour. Cases 24 and 25, however, who had suffered from enteric fever six years before, gave a very marked reaction with 5 per cent. serum within the half hour. One of these two cases had one and the other two relapses. Of the remainder Cases 26 and 30 alone gave a reaction, and that with 50 per cent. serum only. Cases 30 to 60 had never suffered from enteric fever. Of these not a single one gave the reaction with 5 per cent. serum within half an hour; two gave a reaction after twenty-four hours. Eleven gave a reaction with 50 per cent. serum within half an hour, and three gave a reaction after twenty-four hours that did not show it within the half hour.

The results of my observations lead me to the following conclusions: 1. As a quantitative reaction (when the serum is sufficiently dilute and the "reaction time" short) the test is of great value when the result is positive. 2. If a sufficiently long interval has elapsed since the onset of the disease a negative result is of value. When a large number of observations have been made during the earlier periods of the disease, to determine the average time of the appearance of the reaction in the serum, the negative results will be of still greater value. 3. The microscopic reaction is more speedy and more delicate than the macroscopic reaction. 4. The results of von Jez and others who have used a technique similar to his only show that too strong a serum, acting for as long a time as twenty-four hours, may give a reaction when it is obtained from a normal subject. They bear out the statement of Grünbaum that the reaction must be considered as a quantitative, and not as a merely qualitative, one.

In conclusion, I must express my indebtedness to Dr. Goodall, Dr. Goodhart, Dr. L. E. Shaw, Dr. F. Taylor, and Dr. Washbourn for their kindness in allowing me to examine patients under their care and to Dr. Washbourn for much valuable assistance.

Since writing the above, I have read the account which Professor Delépine[11] gives of his technique. It will be seen that with the manner of collecting the blood in sterile pipettes I am in accord, and I think that he will agree with me that the method which I have described is not beyond the capacity of medical men, as Wyatt-Johnston maintains. With regard to the difficulty of making exact dilutions by means of graduated pipettes, "when eight or ten observations have to be made in a short time," I do not agree. On one occasion I made six observations in half an hour; each observation included making the 5 per cent. and 50 per cent. dilutions for the hanging-drop specimens and the addition of the 90 mm.^{3} of the broth culture to the dilute serum. With a good blow-pipe at hand thirty or forty of the pipettes I have described can be made in an hour, and graduated in another hour, by any capable laboratory assistant. Directly the pipettes have been used they are dropped into a cylinder containing 5 per cent. lysol, and subsequently cleaned and sterilised as required. Professor Delépine also objects to exact measurements by graduated pipettes, because it is not always easy to get a small drop of serum out of the blood. I do not think that he will find any difficulty in obtaining 20 mm.^{3} (one-third drop), which is all that I require.

[8] Journal of Pathology and Bacteriology, July, 1896.
[9] Brit. Med. Jour., Jan. 16th, 1897.
[10] Journal of Pathology and Bacteriology, July, 1896.
[11] Brit. Med. Jour., April 17th, 1897.

A PLEA FOR THE LARGER USE OF ERGOT IN OBSTETRICS.[1]

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THE position of the practitioner who, after somewhat extended obstetric experience, finds himself returning to a question such as the use of ergot in obstetrics, in the discussion of which he has formerly more than once taken part, and which long before he had entered either the profession or the world was fully debated and apparently decided, may possibly serve to recall the task of Sisyphus as described by the poet:—

> "With useless endeavour,
> For ever, for ever,
> Is Sisyphus rolling
> His stone up the mountain."

Nevertheless, that it is not quite so superfluous to reconsider this subject at the present time as it might thus seem can, I think, be easily proved. In few respects are the changes

[1] A paper read before the Section of Obstetrics of the Royal Academy of Medicine in Ireland on April 23rd, 1897.

that have been effected in midwifery practice since my student days more marked than with regard to the views then and now generally adopted in reference to the employment of ergot. At that time this drug was very commonly resorted to, and often with little discrimination, in labour cases. A few years subsequently the reaction which was inevitable against that malpractice set in, and has continued to operate and increase up to this period, when, the pendulum of professional opinion having been swung back to the opposite extreme, comparative desuetude has replaced the former abuse of the most potent agent at our command in many cases of powerless labour and impending post-partum hæmorrhage. This result has, I think, been fostered by the teachings of some recent authorities, by whose writings[2] a trend of modern opinion distinctly adverse to the general employment of ergot during labour has become established.

In the following remarks I therefore propose to consider very briefly whether the radical change thus effected is altogether correct in theory and advantageous in practice or not. On the former point it may be observed that some of the objections now urged in obstetric text-books against the general use of ergot are apparently founded on the recent investigations of scientists, who, in the laboratory, have examined the chemical constituents of this drug and their action in the case of some of the lower animals, rather than on actual experience of their effects in the lying-in room. It should therefore be borne in mind that, as Mr. Squire has pointed out, "neither the chemistry of ergot nor the physiological actions of its constituents have yet been definitely determined," and that, moreover, no abstract dicta, however authoritative on these points, can outweigh the testimony to the contrary effect of the countless number of obstetric practitioners who have long used preparations, such as the fluid extract of ergot or Bonjean's ergotine (which are stated to contain a toxic agent of deadly potency in the case of the animals experimented on by Kubert), without any injurious results, when judiciously employed, in the cases of parturient women.

The dangers ascribed to the administration of ergot during labour by the writers referred to include, firstly, its possible fœticidical effects; secondly, the probability of giving rise to such irregular uterine action as may occasion subsequent retention of the placenta; and, thirdly, the direct toxic effect on the maternal system that has been attributed to this drug. With regard to the first of these objections, I need not here occupy any time, as it was disposed of long since by the observations of Dr. Denham, and more recently and conclusively by the experience of our distinguished President, Dr. Atthill, whose views on this subject have been too freshly impressed on us to need any recapitulation. As to the second and third of the reasons, which, as just mentioned, are assigned for the general non-employment of ergot during parturition, I know not how I can deal with them more readily than by a short reference to my own clinical notes. Having, however, employed ergot in a very large number of instances in hospital and private practice during the last twenty-six years, within which, for some time, I occupied the position of master of one lying-in hospital and assistant master of another, it would involve more labour and occupy more space than might now be desirable, were I to refer to the record of all the occasions on which I have administered this ecbolic. I shall therefore submit merely a brief statement of the circumstances under which, in a series of 150 cases, ergot or its preparations were resorted to in midwifery practice, together with the results of its exhibition in each instance.

Abstract of 150 obstetric cases in which ergot was used.—In 70 of these cases the patients were primiparæ; in 80 they were multiparæ. In 148 cases the maternal result was favourable; in 2 instances the cases terminated fatally—viz., in 1 from septicæmia and another from typhoid fever which had commenced before parturition. In 95 cases the drug was given before the birth of the child—viz., in 15 cases for delay from inertia in the first stage of labour, and in 80 cases for delay similarly occasioned in the second stage or for the prophylaxis of hæmorrhage or for other complications then. In 92 of these instances the children were delivered alive either by uterine action or by the forceps; in 3 they were stillborn; and in 2 of the latter cases, the child being then putrid, no toxic effect could be ascribed to the ecbolic. Of the 95 cases in which ergot was given before the birth of the child in 86 the placenta was normally expelled, and in 9 its removal had to be assisted or effected—viz., in 4 for morbid adhesions, in 4 for persistent uterine inertia, and in 1 for irregular or hour-glass contraction. In 55 cases ergot was given after the birth of the child—viz., in 25 during the third stage to hasten expulsion of the placenta or prevent hæmorrhage, and in 30 after completion of labour for the arrest of post-partum flooding or, for some other reasons, to stimulate and secure tonic contraction of the uterus.

My own experience, as just summarised, points to the conclusion that many of the evil effects that have been ascribed to ergot are the result of its abuse, and therefore afford no reason against its judicious employment. Thus, for instance, if ergot be given in unsuitable cases and at unsuitable periods of parturition or in those small, inefficient, and frequently repeated doses that are now advocated, the results that may follow should, I think, be accredited to the practitioner rather than to the agent he has so resorted to. At the same time, I need hardly disclaim any desire to minimise in the least the necessity for all due caution in the use of this potent drug, or the dangers to mother or child which may be consequent on its misuse, and which are too obvious to need any detailed reference here. I may, however, on the latter point at least repeat that, as I long since elsewhere observed, "under no circumstances should ergot or ergotine be given during labour until the os uteri is fully dilated or so dilatable as to allow of delivery by the forceps if the child be not expelled by uterine action within an hour of its administration or at any time sooner that this may become necessary, as otherwise the fœtal circulation might very probably become arrested by the protracted tonic or unremitting uterine action which is the characteristic effect of this drug." That effect was also brought under notice in a former paper of mine, in which I instanced the fact that in a series of cases that came within my cognisance in which ergot had been given too early before forceps delivery, in rather more than one-fourth of these instances the children were stillborn. And hence for my own part I would almost as soon entrust a case of instrumental delivery to a student just commencing his midwifery as allow him or the nurse to administer ergot until thoroughly conversant with the principles which should direct its employment and the evils that may result from its improper exhibition.

The conditions and circumstances under which ergot may be employed in obstetrics.—These may be here briefly stated, although, as will be seen, I ascribe a wider range of utility to ergot in midwifery practice than is generally conceded. Nevertheless, I would presume to observe that my views are the result of actual clinical experience which it may not be easy to disprove by any merely theoretical objections, however strongly expressed. Judging from the recent literature of this subject it apparently is not superfluous to premise that to use any preparation of ergot safely and effectively in the labour cases referred to it is essential, (1) that the presentation should be natural or cranial, except in some instances of breech presentation, in which it may possibly be necessary to deal at once with uterine inertia; (2) that there should be no marked disproportion between the fœtus and mother or any other physical impediment in the genital tract to delivery; (3) that the os uteri, if not previously fully dilated, should be so dilatable as to allow of speedy extraction by the forceps when necessary; and (4) that the preparation selected, the dose, and the method in which it is employed should be well calculated to produce the required effect.

Subject to the foregoing conditions, ergot may with utility be employed when actually indicated and judiciously administered either before, during, or after the second stage of labour. That is to say, it may be given before the full dilatation of a dilatable os—(1) in some instances of long delay from uterine inertia in which there is imminent danger to mother or child; or (2) risk of subsequent flooding from further protraction of the case. During the second stage it may be employed (3) in labour rendered abnormally tedious by deficiency of uterine action or otherwise complicated, and in which the presentation is natural and no other impediments to delivery exist; or (4) for the prophylaxis of apparently impending flooding. During the third stage ergot may be resorted to (5) for the expulsion of the placenta when retained by inertia; or (6) for the arrest of loss of blood. After delivery this ecbolic may be employed either immediately (7) to check or prevent hæmorrhage, or, subsequently (8), to produce tonic

[2] Vide Lusk: Science and Art of Midwifery, p. 461, 1896. Playfair: Science and Art of Midwifery, vol. ii., p. 10. Winkell: Text-book of Obstetrics, 1890, p. 513.

or permanent contraction, and, by sealing up the uterine vessels, thus lessen the liability to bacteriological invasion or sepsis; or else at the same time it may be exhibited (9) for the purpose of expelling clots from the womb and so arresting after pains. Lastly (10), in the majority of multiparous patients ergot may be administered during the puerperal period with the object of stimulating the muscular tonicity of the uterus, accelerating the process by which its return to a normal condition after parturition is effected, and thus obviating the future possibility of chronic subinvolution.

Method of employing ergot in obstetric cases.—To produce the desired effects in the cases above referred to it is obviously necessary, as I may repeat, that ergot should be administered in the form, dose, and method best calculated to secure speedy and permanent contraction of the muscular tissues. Under no circumstances, therefore, should ergot be given in obstetric practice in those small, utterly inefficient, and frequently repeated doses that have been recommended by several modern authorities, but which, in my opinion, are calculated to do more harm than good by producing irregular and evanescent waves of muscular contractility instead of that firm, regular, and tonic uterine contraction by which alone persistent inertia may be overcome, the fœtus or the placenta expelled, post-partum hæmorrhage prevented or arrested, retained clots and membranous or placental débris dislodged, and subsequent sepsis or still later subinvolution may be obviated. With these objects in my early days an extemporaneous infusion of the crude, freshly powdered drug was most generally employed, and though troublesome to prepare and, nauseous to take, was of unquestionable ecbolic activity. This in turn was replaced by the no less efficacious liquor ergotæ of the British Pharmacopœia or by a glycerine solution, such as Long's, which, when I was assistant physician to the Rotunda Hospital, was as largely and usefully employed as any of the more recent preparations of ergot have since been. Amongst the later I may more especially mention Bonjean's ergotine, Oppenheimer's ergol, and Burroughs, Wellcome, and Co.'s tabloids of ergotin and of its citrate, each of which I have with advantage employed in many instances. At the same time, however, I may confess my possibly antiquated predilection for the fresh liquid extract of the Pharmacopœia, which I have found, when, as I think, properly administered—that is to say, in suitable cases and in doses of from two to three drachms by the mouth, together with the simultaneous exhibition of another drachm, or even two, by deep hypodermic injection in the gluteal region—generally most reliable as a safe and efficient ecbolic. To act thus, however, ergot—whatever preparation be selected—like all other potent drugs, must be judiciously employed, or, in other words, should be given only in suitable cases and conditions, at the proper time, in an effective manner, and with due precautions.

Dublin.

THE BACTERIOLOGICAL DIAGNOSIS OF TYPHOID FEVER.

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THE examination of sputum for tubercle bacilli and of the membrane from suspected cases of diphtheria by the preparation of cultures has in each case proved to be such a valuable aid to diagnosis that the wish has often been expressed that a similar bacteriological test for the presence of typhoid fever was available. We have now good reason to believe that such a want has been supplied by Widal's method, which bids fair to be of great assistance in determining the true nature of doubtful cases of typhoid fever at an early stage of the disease. As the new method is still on its trial I venture to record my own experience of it. The gradual development of the test and the various ways in which it may be applied have been so recently described by Professor Delépine[1] in this country that a short description only will be given of the method adopted in the cases which I have examined.

[1] THE LANCET, Dec. 5th, 1896, p. 1589; Brit. Med. Jour., April 17th, 1897.

It is well to recognise that this test can be rapidly made at the bedside, and in many cases a positive result can be thus obtained earlier than when a specimen of the blood has to be sent to a laboratory for examination. In order to apply the test in this manner it is necessary to be provided with a pure broth culture of the typhoid bacillus which has been grown for from eighteen to twenty-four hours in an incubator at 37° C., a microscope fitted with a lens having a magnification of from 200 to 300 diameters, or, still better, with a $\frac{1}{12}$th in. oil immersion lens, a platinum loop, a pair of forceps, a spirit lamp, slides and cover-glasses. These can be carried in a handbag, so that the test can be applied in a private house as well as in a hospital ward by anyone who has the requisite knowledge of bacteriological methods. Before carrying out the test a specimen of the broth culture must be examined under the microscope so as to make sure the bacilli in it are actively motile and show no agglomeration. Thirty-four cases have been examined. In twenty-two freshly-drawn blood, in eight dried blood, and in four serum has been used. The test has been applied in the manner recommended by Professor Delépine as follows. The lobule of the ear or the tip of a finger is pricked with a clean needle, and of the blood thus obtained one platinum loopful is placed on one corner of a clean cover-slip. Nine loopfuls of the broth culture of the typhoid bacillus are then put separately on the same cover-glass and uniformly mixed with the blood by means of the platinum loop. The cover-glass is at once turned over, placed on a glass slide, and examined under the microscope. By this method the reaction is rapidly developed.

Of fourteen cases of typhoid fever in which the reaction was obtained with fresh blood it was immediate in eight, well marked agglomeration of the bacilli being seen directly the specimen was put under the microscope. In the remaining six the agglomeration was quite distinct within fifteen minutes of the first examination of the specimen. When the reaction was not observed within a few minutes it was found to be advisable to run a little melted paraffin round the edge of the cover-glass so as to prevent evaporation from the edges of the specimen and so preserve it for more prolonged examination.

In twenty-four cases in which a clinical diagnosis of typhoid fever had been made at the time of the examination the reaction was obtained. Some of the cases were convalescent, but in none had the temperature been normal for more than three weeks. These cases are arranged in the following table:—

Table of Twenty-four Cases of Typhoid Fever in which Widal's Reaction was obtained.

Sex.	Age.	Date of examination from onset of illness.	Method of testing.	Result.
M.	11	5th day.	Dried blood.	Immediate reaction.
F.*	—	6th ,,	,, ,,	Reaction.
M.*	—	7th ,,	,, ,,	,,
—	—	8th ,,	Fresh blood.	Immediate reaction.
M.†	11	14th ,,	,, ,,	,, ,,
M.†	19	14th ,,	,, ,,	Reaction in five minutes.
M.†	12	19th ,,	,, ,,	,, ,, ,,
F.	13	19th ,,	,, ,,	Immediate reaction.
M.	20	20th ,,	Serum.	Reaction.
F.	8	3rd week.	Dried blood.	Reaction in thirty minutes.
M.*	—	3rd ,,	Fresh blood.	Immediate reaction.
M.	16	3rd ,,	Serum.	Reaction.
F.	13	24th day.	Dried blood.	Immediate reaction.
F.†	3	25th ,,	Fresh blood.	Reaction in fifteen minutes.
M.	10	27th ,,	,, ,,	Immediate reaction.
M.	9	28th ,,	Dried blood.	Reaction.
—	6	30th ,,	Serum.	Immediate reaction.
M.	19	35th ,,	Fresh blood.	Reaction in ten minutes.
F.	14	43rd ,,	Dried blood.	Reaction.
M.	21	44th ,,	Fresh blood.	Immediate reaction.
M.	21	55th ,,	,, ,,	,, ,,
M.	22	60th ,,	,, ,,	Reaction in a few minutes.
M.	14	71st ,,	,, ,,	Immediate reaction.
M.	13	?	,, ,,	Reaction in fifteen minutes.

* Members of one family. † Members of one family.

In one case there had been a typical severe attack of enteric fever, but the temperature had been normal for six weeks at the time the blood was examined, and no reaction was obtained, although the specimen was kept under observation for two hours. In another case which had been admitted to the hospital as a doubtful case of enteric fever of five days' duration the temperature became normal on the seventh day. The blood was examined on the twenty-seventh day, but no reaction was observed, so that the case cannot be considered as one of enteric fever at all.

From this it will be seen that in no case did the reaction fail to occur when the blood or serum was examined during the febrile stage or during the first three weeks of convalescence. The only case in which it was not obtained was that in which convalescence had already lasted for six weeks. In one case of acute pulmonary tuberculosis a very slight agglomeration of the bacilli was observed, but the patient was a Chilian who could not speak English and we were unable to ascertain whether he had suffered from typhoid fever previously or not. The blood of two normal persons gave no reaction, nor was any agglomeration of the bacilli observed in the following cases: ulcerative endocarditis with subsequent peritonitis and pleurisy due to a diplococcus, acute rheumatism followed by exophthalmic goitre, scarlet fever with middle-ear disease and meningitis, influenza with severe gastro-intestinal symptoms, and measles. In some of these cases the result of the test was of much assistance in excluding typhoid fever at an earlier date than was possible by the clinical symptoms alone.

In conclusion, I wish to express my best thanks to those who have so kindly allowed me to examine their cases, and especially to Dr. H. E. Armstrong, the medical superintendent of the Newcastle City Hospital for Infectious Diseases, and Dr. C. V. Dingle, the resident medical officer, for much valuable assistance.

Newcastle-on-Tyne.

A NOTE ON THE BACTERIOLOGICAL CONDITIONS PRESENT IN ULCERS TREATED BY OXYGEN GAS.

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IN a very interesting paper read before the British Medical Association at Carlisle in July last,[1] Mr. George Stoker described in detail his method of the surgical uses of oxygen gas, and gave a series of cases of chronic ulcers and burns successfully treated by this method. In the same paper he also gave, in conjunction with Mr. George Dineen, a short bacteriological account of the cases so treated, and a summary of conclusions.

With a view to testing the accuracy of these conclusions, advantage was taken of the opportunity of making cultivations from a series of cases of chronic ulcers undergoing the oxygen treatment at the Royal Victoria Hospital, Netley. The methods pursued were in the main the same as described by Mr. Stoker in his paper—viz., cultivations were made from the ulcers before the application of oxygen and at intervals during the treatment. In all cases the cultivations were made on agar-agar tubes and incubated at 37° C. for periods varying from twenty-four to forty-eight hours. Special notice was taken as to whether the favourable progress of healing corresponded with the disappearance of "rod bacteria" in cases where they were present at the outset, and a plentiful growth of staphylococci. It is to be noted that Mr. Stoker in his paper mentions that staphylococci are favourable and "rod bacteria" unfavourable micro-organisms when present in a wound undergoing oxygen treatment. He also mentions that soon after the application of oxygen, and when healing sets in, that it is accompanied by a disappearance of the "rods," but not of the staphylococci, which continue to grow until healing is complete. No attempt was made to classify these "rod bacteria." The majority were short motile rods with rounded ends, growing well on any ordinary medium, and producing liquefaction in gelatin.

[1] Brit. Med. Jour., Oct. 24th, 1896.

Between February 19th and April 3rd seven cases of chronic ulcers, all specific except one, were put under the oxygen treatment. The surfaces of the ulcers were attended to in the manner described by Mr. Stoker in his paper. All the patients were men under the age of thirty years, and most of them were in a feeble state of health, emaciated, and broken down from the effects of constitutional disease and service in India, and were not good subjects to respond to any treatment. Notwithstanding the inferiority of the material to work upon, marked improvement took place in all at an early stage; pain was diminished, the discharge became less, "rod bacteria" disappeared, and staphylococci flourished all the time.

CASE 1.—This patient suffered from a specific ulcer of the leg of four months' standing. On Feb 19th treatment was commenced with half oxygen and half air. Improvement was noted on the third day and continued until March 13th, when the ulcer had quite healed. In this case all the cultivations showed the staphylococcus pyogenes citreus only.

CASE 2.—The patient was affected by rupial ulcerations on the arms and legs of five months' standing. On Feb. 19th treatment by half oxygen and half air was applied to the left arm only, the legs and right arm having other treatment. Improvement was noticed on the second day, and on Feb. 27th all the ulcers on the left arm had healed, while for the most part those on the right arm and legs remained open. The first cultivation consisted of the staphylococcus pyogenes citreus and short "rods," and the second cultivation, taken four days after the first, showed staphylococcus pyogenes citreus only.

CASE 3.—This was a case of specific ulcer on the scalp of thirteen months' duration. On Feb. 20th pure oxygen was applied, and on the 25th half oxygen and half air were applied. The first cultivation showed staphylococci only. Healing progressed satisfactorily for the first week when it came to a standstill. After this it was noticed that a new gummatous ulcer had formed close to the old one, a circumstance which interfered considerably with its healing. On March 5th the cultivation showed a copious growth of short "rods" and only a few staphylococci. The ulcer was then sown with a pure culture of staphylococcus pyogenes citreus. On the 14th, owing to the predominance of short "rods" in the cultivations, the ulcer was again sown with a pure culture of staphylococcus pyogenes citreus. On the 20th the improvement began and the cultivations at this time showed a plentiful growth of staphylococci and a few "rods" only. On the 28th improvement was again at a standstill and the cultivations showed "rods" only. On April 1st improvement again set in and continued up to April 18th, the date of the last observation. All the cultivations after April 1st showed staphylococci only. In this case delay in healing was accompanied by the presence of "rods" in the cultivations, and when progress set in these diminished and at last disappeared.

CASE 4.—In this patient several syphilitic ulcers were present on the arms, the legs, and the face, of ten months' duration, those on the legs being the worst. The patient was in a very feeble state of health and greatly emaciated. On Feb. 28th treatment by half oxygen and half air was applied to a large ulcer on the right instep. Cultivations showed a mixture of short "rods" and staphylococci. Cultivations from another ulcer on the right knee which was being treated in the ordinary way showed a mixture of short "rods" and staphylococci. By March 6th both sides had improved. Cultivations from the ulcer on the instep showed staphylococci only, and from the ulcer on the knee a mixture of "rods" and staphylococci. On the 13th oxygen was applied to the ulcer of the knee. On the 18th both ulcers were improving and the cultivations from both showed staphylococci only. The oxygen was then stopped on account of the patient being so weak and irritable that he could not bear the necessary restraint for the continuous application of the treatment.

CASE 5.—This patient suffered from three ulcers on the shin of four weeks' standing, over a large cicatrix and caused by a fall. On March 13th, half oxygen and half air were applied. Cultivations showed a plentiful growth of "rods" and a few staphylococci. On the 16th, the ulcers had healed. Cultivations were made on the 15th and showed a plentiful growth of staphylococci and a few "rods" only.

CASE 6.—This case was one of gummatous ulcerations on the right shin and instep of four months' duration. On March 1st, half oxygen and half air were applied. No cultivations were made before the oxygen treatment.

Improvement set in after two days' oxygen, and on April 18th the ulcers had almost healed. Cultivations all showed staphylococci only, all having been taken after exhibition of the oxygen.

CASE 7.—This patient had lupus of the nose and face of nearly three years' standing. Scraping was done two days before the oxygen was commenced. On March 28th, half oxygen and half air were applied. No cultivation was made before the use of oxygen. By April 3rd there was marked improvement in the ulcers. Cultivations showed a plentiful growth of staphylococci only. By the 5th all the ulcers had closed.

In all the foregoing, with the exception of Case 5, the ulcers were of a very chronic character and had shown great resistance to other methods of treatment. In all the cases improvement was noted in from two to four days after the application of the oxygen gas, and with the exception of Case 3 the improvement was uninterrupted.

A complete explanation as to how this improvement was brought about is at present difficult to give. Possibly the oxygen acts in one or more of the following ways: (*a*) diminution of irritation—any dressing applied to an open sore causes more irritation than a mixture of oxygen and pure air; (*b*) direct stimulation without irritation; (*c*) the oxygen may oxidise the toxins produced by micro-organisms in the surface of the ulcer—this may apply more especially to the toxins produced by bacilli when present; and (*d*) as stated by Mr. Stoker, the oxygen has possibly a selective power in its action on micro-organisms present in the ulcer, encouraging staphylococci, which then outgrow the bacilli. Some of the foregoing points are at present under investigation. Here, as yet, we have only the practical results of a few cases to go by, all of which are in favour of the oxygen treatment.

Netley.

Clinical Notes:

MEDICAL, SURGICAL, OBSTETRICAL, AND THERAPEUTICAL.

ON HOLOCAINE IN OPHTHALMIC SURGERY.

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A FEW months ago I recorded in THE LANCET a trial of eucaine as an anæsthetic in ophthalmic surgery, but I found on further use that it was not free from certain disadvantages. The first application to the conjunctiva was apt to be acutely painful, the smarting continuing with some severity for several minutes in some persons, while different specimens of the drug appeared to differ in their power of producing it. I have been told that a modified preparation which has since come into the market, and is sold as "Eucaine B," is not painful, but I have no personal experience of its effects.

On March 27th in the present year a paper was read before the Belgian Academy of Medicine by Dr. Deneffe of Ghent on a new alkaloid called holocaine, which he described as an effective anæsthetic for ophthalmic purposes, and for which he claimed many advantages over cocaine. He said that by applying a drop of a 1 per cent. solution to the eye three times, at intervals of fifteen seconds, complete anæsthesia would be established in three minutes, without pain, without change in the diameter of the superficial vessels, without dilatation of the pupil, and without paralysis of the accommodation. These results were described as constant. As soon as I read Dr. Deneffe's paper I made an endeavour to procure the holocaine, but there seemed to be none in London. Ultimately, Mr. Rogers, of 327, Oxford-street, obtained for me a supply, and last week I was enabled to use it. In the meanwhile Dr. Gutmann had contributed a paper on the new alkaloid to the *Berliner Klinische Wochenschrift*, and, while confirming what had been said by Dr. Deneffe, he mentioned as an additional advantage that it did not act injuriously upon the corneal epithelium. But he also mentioned that the solution could only be used as an application to the conjunctiva, being actively poisonous if injected under the skin (*die subkutane Injektion zu starke Giftwirkung bedingt*), and that it could not be sterilised in vessels of alkaline glass, as it became turbid when heated in them. He advised that it should only be heated in porcelain vessels.

I received a supply of holocaine last week, and used a 1 per cent. solution in the manner described by Dr. Deneffe, having first applied some to my own eye and found that it gave no pain. Four applications were made to the patient in the course of a minute; and at the end of four minutes from the first of them I performed cataract extraction with iridectomy. The patient was unconscious of the first incision, and was barely conscious of the iridectomy, not flinching or moving the eye on account of it. The section healed perfectly by the first intention. A day or two later I used the same solution before slitting up the lacrymal canaliculus, and rendered the little operation absolutely painless. As asserted by Dr. Deneffe, there was no action upon either the conjunctival bloodvessels, the pupil, or the accommodation; and I cannot but think that the new agent will be found highly useful in ophthalmic practice. The promptitude of its action is alone of no inconsiderable advantage.

Harley-street, W.

FUNCTIONAL ACTIVITY OF MAMMARY GLAND IN AN INFANT.

BY ERNEST S. HAWTHORNE, L.R.C.P., L.R.C.S. IREL.

THE following case may prove to be of interest to readers of THE LANCET. A woman consulted me on March 11th about her baby girl and stated that when the child was six days old she observed her to be very peevish and difficult to pacify, and that when she touched the child's breasts she would scream piteously. She examined the breasts and found them to be enlarged and painful. She then squeezed them, when about two teaspoonfuls of whitish fluid oozed out from each nipple. The child then became quite quiet, and continued so until the evening, when once more she showed evidence of pain. The mother again examined the breasts and found them in a similar condition to that of the morning, so she again applied pressure and with a like result. Thus, she continued (to use her own words) "milking the breasts" every day for five days, when she consulted me. I examined the child's breasts and found them enlarged to about the size of an orange cut in half; the nipples were prominent, and on squeezing them a fluid resembling the mother's milk in appearance escaped. The child did not seem to be in any pain whilst applying the pressure, and I was able to obtain about three drachms of fluid from both nipples. I applied a small belladonna plaster over both breasts, with the result that they are now in a normal condition.

Georgetown, Queensland.

NOTE ON AN UNUSUALLY HEAVY HEART.[1]

BY G. A. REID, M.B. ABERD.,
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THE weight of the heart in the following case merits, in my opinion, its being put on record. A man, aged thirty-one years, was admitted into the Cumberland and Westmorland Asylum in December, 1896. He was 68 in. in height and 143 lb. in weight. He was known to have suffered from heart disease for nearly three years. He had been a heavy drinker, and was said to have contracted syphilis, but had never had rheumatism. At one time he competed frequently in foot-races. On admission he showed all the symptoms of marked cardiac disease; his face was pale and anxious-looking, he suffered from orthopnœa, and he had severe anginal attacks, which were alleviated by the inhalation of nitrite of amyl; his pulse was 132, and of the "water-hammer" variety; the apex beat, which was diffused and heaving, was markedly displaced downwards and to the left, and was in the seventh interspace one and a half inches outside the nipple line; the area of cardiac dulness extended from the third rib downwards and from the right sternal margin outwards to the

[1] A paper read at a meeting of the Border Counties Branch of the British Medical Association at Kendal on April 30th, 1897. The heart was exhibited.

apex beat; a mitral systolic and double aortic murmurs were present; there was no dropsy. The mental symptoms were excessive nervousness, vague anxiety, irritability, and sleeplessness, and, in reality, were greatly the result of the heart disease. He remained in very weak health, and died rather suddenly in bed on April 28th, sixteen weeks after admission. It is unnecessary for my purpose to give a detailed account of the post-mortem appearances, but a complete examination was made, as in each case of death in the asylum since 1867. The heart was free in the pericardial sac and all its cavities were distended with blood. The whole organ was dilated and hypertrophied, especially the left ventricle, its walls measuring from three-quarters to one inch in thickness. The aortic valve was incompetent; the other valves were healthy. The cone diameters were: T 1·6, P 1·25, M 1·6, A 1 35. The base of the aorta was dilated and atheromatous, and the coronary orifices were much narrowed. The heart muscle was pale and there was a considerable external deposit of fat. The organ weighed 41 ounces. The lungs were free in the pleural cavities and healthy. The liver was much congested and weighed 69 ounces. The kidneys were large and pale, weighing 6½ ounces and 7 ounces respectively, and showed no cortical atrophy. The other organs were healthy. There were a few ounces of clear fluid in each serous cavity.

In the records of necropsies performed in this asylum since 1863, now embracing nearly 1400 cases, the two heaviest hearts previously noted weighed 31 ounces and 31½ ounces. Delafield and Prudden have placed on record one heart weighing 50 ounces, and Dulles another weighing 48 ounces. So far as I can ascertain from the literature on the subject at my disposal, no other heart over 40 ounces in weight has been recorded. It should be borne in mind that the size of the heart is said to bear a relationship to the size of the individual. In this case the heart was immense in proportion.

Carlisle.

A Mirror
OF
HOSPITAL PRACTICE,
BRITISH AND FOREIGN.

Nulla autem est alia pro certo noscendi via, nisi quamplurimas et morborum et dissectionum historias, tum aliorum tum proprias collectas habere, et inter se comparare.—MORGAGNI *De Sed. et Caus. Morb.*, lib. iv. Proœmium.

GUY'S HOSPITAL.

CHRONIC OSTEITIS OF THE TIBIA TREATED BY DRILLING THE BONE.

(Under the care of Mr. DAVIES-COLLEY.)

MEDICINAL treatment for the pain of osteosclerosis is frequently extremely unsatisfactory, and trephining, which has been employed, is for such an ailment an unnecessarily severe procedure. "Linear osteotomy" has been performed for the condition, having been introduced by Erichsen. This consists in sawing the bone with a Hey's saw in the line of a skin incision; it gives great relief to the tension; but the method employed in the following case is certainly more simple than either trephining or linear osteotomy, as no skin incision is required, and it has the additional advantage of assisting greatly in the diagnosis of more deeply-seated mischief should it be present. For the notes of this case we are indebted to Mr. H. W. Dudgeon, clinical assistant.

A woman, aged twenty-six years, married, was admitted into Guy's Hospital on March 31st, 1897, complaining of pain in the lower and inner part of the right leg. In her family history the only fact of importance which could be elicited was that one of her brothers had died from pulmonary phthisis. She herself had had no illness previously to the present one. When seventeen years old (nine years previously) she was troubled with pain in the lower and inner side of the right leg, and this pain was especially severe at her menstrual periods. It had continued up to the time of her admission, but with varying severity. Four years previously she married, and a year and a half later, after the birth of her first child, it was noticed that the right leg, especially in the lower part, was swollen. As time went on this swelling did not diminish, but rather increased, and when her second child was born it was more marked still. On examination there was no sign of disease elsewhere than in the right leg, all the organs being healthy. The urine was normal. There was no evidence of congenital syphilis. Occupying the lower third of the right leg on the inner aspect was an obvious swelling. Its margins were ill defined, as it blended gradually with the unaffected bone above; its surface was smooth, and although the enlargement was obvious the prominence was not great. The circumference of the right leg taken over the most raised part of the swelling was seven and three-quarter inches; on the left side the circumference taken at the same level was six and three-quarter inches. The swelling was firm, and evidently due to enlargement of the tibia. Tenderness on pressure was complained of over the whole extent of the swelling. As the patient had been lying in bed there was then no œdema, but she said that it returned immediately she got about, and that if she did much walking it became very marked. She complained very much of pain, which was especially severe at night, and was not at all relieved by the rest in bed. On April 2nd, the skin over the lower third of the tibia having been carefully cleansed, Mr. Davies-Colley drilled holes through the skin into every part of the thickened bone. The drill was used thirteen times in all. No pus escaped by any of the openings, and no cavity was found in any part of the thickened bone. The wounds were dressed with sal-alembroth gauze and the limb was placed in a Bavarian splint. During the following night the patient complained of some pain in the leg, but by the help of a hypodermic injection of morphia she obtained a fair night's rest. On the 5th she had at intervals a good deal of pain. The splint was cut open. On the 11th the pain at times was still severe, but on the whole it was better. The temperature had on several occasions been a little above normal, but the highest point reached had been 100 6° F. On the 12th the pain was decidedly better, being both less frequent and less severe.

Remarks by Mr. DAVIES-COLLEY.—This case of chronic osteitis of the lower third of the tibia I suspect to be due to inherited syphilis. Before operating I was uncertain whether the chronic inflammation was around a central sequestrum or abscess, or whether it was a case of sclerosing osteitis. In such cases I think the best plan is to explore the whole of the thickened bone by means of a brad-awl or Archimedean drill without making any preliminary incision through the skin. If at any point pus escapes, or a cavity is found in the bone, it is easy to make an incision, and to open up the abscess or sequestrum cavity with a gouge or trephine. Should no such cavity be found the case is probably one of osteosclerosis, and much benefit is usually obtained from the relief of tension, and possibly also from the admission of healthy granulation tissue into the interior of the bone through the drill holes. Although the thickening of the bone still remains, the patient is now free from the severe nocturnal pain from which she had suffered.

THE name of Mr. Richard Rogers, L.D.S. R.C S.I., dental surgeon to the Cheltenham General Hospital, has been added by the Lord Chancellor to the Commission of the Peace for Gloucestershire, on the recommendation of the Lord-Lieutenant (the Earl of Ducie).

MEDICAL, SURGICAL, AND HYGIENIC EXHIBITION.—With the object of showing the progress that has been made during the sixty years' reign of the Queen in the "manufacture of chemical preparations for medical purposes, surgical instruments and appliances, food products, sanitary compounds and apparatus, and the literature bearing on the science and art of medicine and surgery," an exhibition is to be held in the Queen's Hall, Langham-place, W., from the 26th to the 30th July next, under the auspices of the Medical, Surgical, and Hygienic Exhibitors' Association. A pathological and anatomical museum is to be a feature of the exhibition, and only those exhibits that "either directly or accessorily appeal to medical men as being of necessity or utility to them in the pursuit of their profession" will be admitted. Invitations and admission cards will be sent to members of the profession throughout the United Kingdom whose names appear in the Medical Register for the current year. An orchestra has been engaged to give selections of instrumental music in the afternoons and evenings during the period of the exhibition.

Medical Societies.

ROYAL MEDICAL AND CHIRURGICAL SOCIETY.

Ligature of the Subclavian Artery for Aneurysm.—Ligature of the Carotid Arteries for Tonsillar Hæmorrhage.—Irreducible Hernia.

A MEETING of this society was held on May 26th, the President, Dr. HOWSHIP DICKINSON, being in the chair.

At the commencement of the meeting the President proposed that a loyal address should be drawn up and forwarded to Her Majesty conveying the congratulations of the Royal Medical and Chirurgical Society on the celebration of her Diamond Jubilee. He remarked that in 1840 the Queen as patron signed the book of the society, following the precedent set by her predecessor, William IV. The motion was carried by acclamation, and the book containing the Royal signature was handed round for the inspection of the Fellows.

Mr. H. H. CLUTTON read a paper on a case of Subclavian Aneurysm successfully treated by Ligature. The case was one of an aneurysm of the third part of the right subclavian artery, for which the first part of the artery was ligatured twice, and a few days after the second occasion a distal ligature was also applied to the first part of the axillary artery. The patient, a spare, healthy man, fifty-four years of age, was seen by Dr. Sharkey in February, 1896, and sent to him (Mr. Clutton) with the statement that the heart and aorta were free from any obvious signs of disease. There was a small sacculated aneurysm in the third part of the right subclavian artery reaching from the outer border of the scalenus anticus to the clavicle. On March 18th, 1896, a ligature prepared from goldbeaters' skin was applied on the proximal side at the junction of the first and second part of the subclavian artery. The ligature was tied by means of the "stay-knot" recommended by Ballance and Edmunds with sufficient tightness to arrest the circulation, but without rupturing the coats. The superior intercostal artery was also tied at the same time and in the same manner. At the end of five or six weeks the aneurysm and the radial artery were pulsating as they did before the operation. This was probably due to the ligature becoming absorbed. On June 10th the first part of the subclavian artery was exposed and tied with floss silk on the proximal side of the first ligature. The internal mammary and thyroid axis were also tied at the same time. The stay-knot was employed for each ligature, and the walls of the vessels were approximated without sufficient tightness to rupture the coats. Pulsation in the aneurysm and in the radial artery ceased as the ligature on the main vessel was being tightened. On June 17th the aneurysm was again pulsating. The first part of the axillary artery was therefore immediately tied in the same manner with floss silk, so as to cut off all the collateral vessels from the intercostals in the axilla. After this operation the aneurysm ceased to pulsate and gradually disappeared, so that the patient left the hospital on Aug. 8th without any swelling above the clavicle. Mr. Clutton considered it probable that if the first ligature had been of silk instead of an animal material the subsequent operations would have been unnecessary.—Mr. BARWELL remarked that until the last few years ligature of the subclavian artery had only rarely been undertaken. He was glad to see that Mr. Clutton supported the view which he (Mr. Barwell) had advanced fifteen years ago, that it was dangerous to rupture the coats of a vessel so near the heart as the subclavian artery, as it was not safe to trust the vessel with only part of its coats exposed to the strong pulsation unavoidable in that position. For even if the ligature held there was great risk that, if the middle coat was torn and retracted, an aneurysm might form at the seat of the ligature. He had seen the ligatures of goldbeaters' skin, but had no personal experience of their use and would not expect that they would be sufficiently firm to ensure occlusion of the artery. It was a difficult matter, requiring experience and delicacy of touch to judge the exact amount of force necessary to completely arrest the pulsation without rupturing the coats. He agreed with Mr. Clutton that, owing to the short length of artery available and the high arterial pressure, it was not safe to ligature the artery in two places and divide it.—Mr. BERNARD PITTS said that he had met with a similar case, and had operated on it at St. Thomas's Hospital a short time ago. The man had an aneurysm involving the second and third part of the right subclavian artery and also a cardiac lesion. He cut down on the first part of the subclavian artery and had no difficulty in exposing and ligaturing it with a floss silk ligature. He endeavoured, unsuccessfully as it proved, to avoid rupturing the coats. Owing to the encroachment of the tumour it was not possible to find and ligature the branches of the vessel. The pulsation and pain returned after a short time, and Mr. Ballance, in his absence, explored the site of the ligature and found a swelling, which afterwards proved to be an aneurysm, at the proximal side of the seat of the ligature. Mr. Ballance ligatured the first part of the axillary artery, but hæmorrhage occurred a few weeks later from the site of the exploration, and it was found that at the first operation the coats of the artery had been ruptured owing to their being unusually soft, and that an aneurysm had formed on the proximal side of the ligature. There was no suppuration after the operation in this case.

Mr. CLUTTON also read a paper on a case of Pharyngeal Abscess followed by Hæmorrhage, and treated by Ligature of the Carotid Arteries. The case was one of very severe hæmorrhage from an abscess in the roof of the pharynx above the right tonsil, which was eventually successfully arrested by the ligature of the common external and internal carotid arteries. A man, aged twenty-eight years, a victualler by trade, was admitted into St. Thomas's Hospital, under Dr. Sharkey, on June 20th, 1896, for a "sore-throat" and general pains. The day after admission he bled rather profusely from an abscess in the pharynx above the right tonsil. On the 24th the soft palate was divided for the purpose of a complete examination of the abscess. A hole was then found passing through the wall of the pharynx into the tissues of the neck, from which rapid oozing took place. This opening was enlarged and the cavity plugged with cyanide gauze, as it was thought from the character of the hæmorrhage that the bleeding might be from the internal jugular vein. During the night following this operation he bled so profusely that no doubt could be entertained as to the hæmorrhage being from a large artery, probably the internal carotid. The next day, the 25th, the bifurcation of the common carotid on the right side was exposed, and a goldbeaters' skin ligature applied by means of a "stay-knot" to the common carotid and its two branches. A saline infusion of two pints was given whilst the wound was being closed with sutures. The wound in the neck healed by first intention, and the abscess cavity in the pharynx was found by digital examination to have closed on July 16th. He had no further hæmorrhage after the ligature of the carotid arteries, and left the hospital for a convalescent home on July 25th. Considering the difficulties in determining the exact source of hæmorrhage when it occurred from a pharyngeal abscess, Mr. Clutton considered it to be the safest practice to tie both the external and internal carotid arteries, as well as the common carotid, for all three arteries were reached through the same incision at the bifurcation. The necessity for tying two of them had been well shown by Mr. Pitts' paper in the "St. Thomas's Hospital Reports," vol. xii., and the addition of the third scarcely increased the length of the operation.—Mr. PITTS said that fifteen years ago a patient was admitted into St. Thomas's Hospital, in whom a discharge of pus suddenly occurred from the right tonsil. A few days afterwards there was considerable hæmorrhage, which soon stopped, but a few nights later the patient brought up about a pint of blood, and ligature of the common carotid artery was hastily performed. Twenty-four hours later profuse hæmorrhage recurred and proved rapidly fatal. This showed that ligature of the common carotid alone could not be relied on. He made experiments on the cadaver, and found that if glass tubes were put in the internal and external carotid arteries of one side and coloured fluid were injected from the opposite common carotid artery the fluid appeared almost immediately in the external artery, and also, though much later, in the internal artery. In his case the source of hæmorrhage had proved to be the internal carotid, and he had been led from his experience in this case to insist on the ligature of at least the common and external carotid arteries in such a case.—Mr. HARRISON CRIPPS

said that some years ago, being dissatisfied with the plan of ligaturing the common carotid, he also had been led to experiment by injections on the cadaver. He found, however, that if he divided a branch of the facial branch of the external carotid and injected from the opposite common carotid that the fluid escaped from the proximal end of the cut artery, and he attributed this to regurgitation along the internal carotid by way of the circle of Willis. He had collected sixty-eight cases of ligature of the common carotid and had been struck with the high mortality, largely from brain symptoms, occurring immediately or a few days after ligature, or from secondary hæmorrhage, in most cases due to regurgitation down the internal carotid, so that ligature of the common carotid was a very formidable operation. Out of all the cases that he had collected there was clear evidence only in one that the internal carotid was the source of the hæmorrhage, and when that occurred death would probably take place at once, so that the question of operation did not arise. He thought that in most cases ligature of the external carotid would suffice and was much less dangerous than ligature of the common trunk.

Mr. WARRINGTON HAWARD read a paper on Irreducible Hernia. The paper was based upon an analysis of eighty-five cases in which an operation was performed for irreducible hernia. The cases were tabulated so as to show the sex and age of the patients, the situation of the hernia, the duration of the hernia and of its irreducibility, the occurrence of strangulation, the contents of the sac, the cause of irreducibility, the treatment adopted, and the result. The dangers of irreducible herniæ were described and illustrative cases quoted. The conditions on which irreducibility depended were then considered and arranged as follows: thickened and adherent omentum, 31 cases; adhesion of omentum to sac, 34 cases; twisting of omentum, 1 case; cysts in omentum, 1 case; adhesion of intestine to sac, 12 cases; adhesion of coils of intestine, 4 cases; large amount of intestine, 3 cases; and other causes, 5 cases. In a few cases more than one of the above causes of irreducibility were present. It was shown that in nearly every case these conditions are such as are remediable only by operation. From the facts and arguments adduced the following conclusions were drawn:—1. That irreducible hernia is a condition of serious danger, the gravity of which increases with its duration or neglect. 2. That the application of a truss upon an irreducible hernia is not only useless, but harmful. 3. That irreducible herniæ which consist wholly or in part of bowel are very apt to become strangulated. 4. That herniæ consisting wholly of bowel, upon which no truss has been worn, may (even when of large size and of considerable duration) generally be returned by appropriate treatment. 5. That of the cases of hernia in which proper treatment fails to obtain reduction the great majority are irreducible because of adhesions of, or changes in, the protruded viscera—conditions which are remediable only by operation. 6. That the most common cause of irreducibility is the presence in the sac of adherent omentum. 7. That the presence of irreducible omentum in the sac of a hernia is a source of constant danger, which can, nevertheless, be remedied by an operation of extremely small risk. 8. That herniæ containing irreducible bowel are more dangerous than those containing only omentum, and that as the danger of operation increases with the magnitude of the hernia and with the occurrence of adhesions these herniæ should be operated upon as soon as they are proved by the failure of proper treatment to be irreducible.—Mr. A. E. BARKER endorsed all the conclusions at which Mr. Haward had arrived. There was one form of irreducible hernia with which he had met three times in about 200 operations for the radical cure of hernia—viz., a hernia of the sigmoid flexure. The bowel in these cases had been extremely difficult to reduce, and he found that the best procedure was to strip the sac bodily off with the intestine and return it.—Mr. MACREADY was hardly able to assent to the conclusion that operation was always indicated in these cases. He thought that properly applied pressure by means of a truss would succeed in many instances in reducing the hernia. Two-thirds of the inguinal and half of the femoral herniæ that he had treated in this way had been reduced. He thought that there was unnecessary fear lest the pressure of a truss should cause adhesions, and held, on the contrary, that it favoured the absorption of adhesions.—Mr. HAWARD, in reply, said that he had not met with the cases of hernia of the sigmoid flexure described by Mr. Barker. He thought that the pressure of a truss had often done harm in these cases, and that had induced him to bring forward this paper. He had used elastic pressure, combined with purgation, low diet, and elevation of the end of the bed, and had found it successful chiefly in patients who had not previously worn a truss, which he believed to be responsible in many cases for the formation of adhesions.

BRITISH GYNÆCOLOGICAL SOCIETY.

Exhibition of Specimens.—The Value of Exploratory Laparotomy.

A MEETING of this society was held on May 13th, Mr. MAYO ROBSON, President, being in the chair.

Mr. F. BOWREMAN JESSETT showed:—(1) Fibro-myoma of the Uterus—sub-peritoneal hysterectomy; (2) Fibro-myoma of the Uterus—oöphorectomy; (3) Myoma of the Uterus—double pyosalpinx, sub-peritoneal hysterectomy; and (4) Large Fibro-myoma of the Uterus, complicated with pregnancy.—The PRESIDENT, Dr. PURCELL, Dr. C. H. F. ROUTH, Dr. GODSON, and Dr. HEYWOOD SMITH made some observations, and Mr. JESSETT replied.

Dr. HERBERT SNOW read a paper on the Value of Exploratory Laparotomy *per se* in (*a*) Real and (*b*) Supposed Malignant Disease of the Abdominal Organs. Dr. Snow had been struck by the remarkable improvement in certain cases of indubitable malignant disease which followed a simple incision without any further operative procedures, and thought if future explorations were scanned in the light of expected amelioration it would be found that the peritoneum thus stimulated behaves to a certain extent as in tuberculosis. A small part of the tuberculous deposit only is removed, yet the remainder somehow disappears, and the patient becomes and continues well. In malignancy the resulting benefit has hitherto been overlooked through the common practice of sending patients home as incurable directly the wound has healed. In Case 1 a woman, aged forty-nine years, with advanced carcinoma of the sigmoid flexure, gained flesh and lost all bad symptoms, though the favourable change lasted only six weeks. Case 2 was that of a woman, aged fifty-three years, with a rapidly advancing, very vascular deposit in the omentum, secondary to scirrhus of the breast. After incision the advance was materially checked, the mass diminished in size, there was no ascitic trouble, and the woman lived eighteen months. Case 3 was that of a man, aged fifty-eight years, with extensive deposit of carcinoma along the whole posterior surface and most of the greater curvature of the stomach; great improvement took place after incision, but the patient was soon lost sight of. Case 4 was that of a man, aged sixty-four years, with a large sarcomatous mass infiltrating both recti; exploration was made in June, 1896. The growth had diminished in size, the man had no bad symptom, and was now able to work regularly as a sawyer. Case 5 was that of renal exploration for a growth thought to be cancerous and infiltrating the lumbar muscles. All bad symptoms had subsequently vanished. Case 6 was that of a woman, aged forty-eight years, with cancer of the gall-bladder. After exploration she stated that she "felt better and more free from pain than she had done for months." She went home and has since succumbed. From a recent paper by Mr. Leonard Bidwell two cases of diffused peritoneal cancer were quoted in which very pronounced benefit similarly followed laparotomy. Others were cited in which the diagnosis of abdominal "lumps" was shown to contain, in even the ablest hands, a strong element of uncertainty. Dr. Snow concluded that routine exploration should be resorted to in every case of supposed abdominal cancer for two reasons: (*a*) the possibility of error; and (*b*) the fact that as a mere matter of treatment this step always improves, and often materially checks, the advance of the disease, permitting scope for the administration, on which he placed the greatest reliance, of opium with cocaine.—The PRESIDENT said that he had himself operated on cases where, on opening the abdomen, he believed that he had to do with ineradicable malignant disease and had closed the abdomen without proceeding further, yet the patients had got quite well. In one case the operation was in the region of the gall-bladder; before she left hospital the patient was already much better; and now, several years after the operation, she remained quite well. Last week he had a somewhat similar

case; but remembering the previous case he proceeded with the operation and found an enormous gall-bladder, from which he removed eighty stones. In another case, with ascites, on opening the abdomen he thought the patient had malignant disease. The patient got well; it was probably tuberculous. Increased experience would, he thought, show that many of these cases were not malignant.—Dr. CLEMENT GODSON related a case seen by the late Sir Spencer Wells which he diagnosed a tumour of the spleen, and wished to remove. Later the patient was seen by Mr. Meredith in consultation with Dr. Godson, who agreed that it was more probably an enlarged kidney. An exploratory incision was made, and it was found to be such, but so adherent to the surrounding parts that its removal was impossible, so the wound was closed. From that time the patient's condition improved, and she now, several years after, complains of nothing.—Dr. MACNAUGHTON-JONES thought the main point was that most of the cases were not malignant. He saw a case with ascites; some said it was ovarian and some said not. The patient was tapped, but the fluid returned. On making an exploratory incision a hard, enlarged lobe of the liver was found and the abdomen was closed. The patient had since married and borne children.—Dr. PURCELL had a case in which there was a mass in the left iliac region and ascites (which he believed always occurred with malignant disease involving the peritoneum). On opening the abdomen a tumour of the bowel was found, not occluding it, but adherent to everything. He closed the abdomen, and the patient was now, eighteen months later, in good health.—Mr. BOWREMAN JESSETT thought the title of the paper was somewhat a misnomer, since Dr. Snow had not the opportunity in all the cases of saying whether the tumour was malignant or not. In one case he saw a woman with a large tumour; she had vomiting and watery motions. Her medical man diagnosed cancer of the liver, and Sir William Jenner and Dr. Ramskill, who saw her, confirmed the diagnosis. A copious sweet-oil enema caused that tumour to come down into the bedpan. In one or two other cases he had had a similar experience, and in such cases a similar improvement would have followed abdominal section. Dr. Snow had suggested that in many cases gastro-enterostomy might be supplanted by a simple cœliotomy, but he did think that equally good results would follow.—Dr. C. H. F. ROUTH thought that there was often no harm in making an exploratory incision, for in tuberculous cases especially a cure might follow. They did not know how this was brought about, but it might be due to the action of the air.—Mr. J. WALKER SMYTH had had two cases similar to those of Mr. Jessett; in one an enema was given, with the same result. The other was a man with a lump over the pubes; with the catheter a quantity of urine containing pus was drawn off; the tumour disappeared and the man got well.—Dr. HERBERT SNOW, in reply, said that his paper involved two points: (*a*) the advisability of an exploratory incision in cases of doubt; and (*b*) the undoubted improvement that followed this in some cases of genuine cancer. The President's cases fell into the first category. In cases of the second class, the point he wanted to raise was whether they might not count on an improvement for some weeks or months. He had cited no cases which got ultimately well; but in all there was improvement for a time.

LEEDS AND WEST RIDING MEDICO-CHIRURGICAL SOCIETY.

Bacteriological Diagnosis of Enteric Fever.—Mesenteric Cysts.—Triplet Placentæ.—Transposition of the Heart.

A MEETING of this society was held on April 30th, Dr. BRAITHWAITE being in the chair.

Dr. TREVELYAN read a paper on the Bacteriological Diagnosis of Enteric Fever, including the examination of the fæces, urine, and blood. The technical difficulties, and especially the time required, were serious disadvantages in the examination of the fæces. The presence of the enteric fever bacillus in the urine from two cases of enteric fever was demonstrated, and the importance of dealing efficiently with the urine from the point of view of preventing the spread of the disease was emphasised. Widal's serum test for the examination of the blood was exhibited, and the methods recommended by Delépine and by A. Fraenkel were described as being easy to carry out.

Mr. MOYNIHAN read a paper on Mesenteric Cysts, describing two cases upon which he had operated. The first patient was a female, eighteen years of age, who suffered from acute intestinal obstruction. There was an ill-defined swelling to the right of the linea alba. A chylous mesenteric cyst which caused kinking of the gut was opened, stitched to the parietal peritoneum, and drained, the recovery being uneventful. The second case was a boy, aged seven years, who presented symptoms of acute intestinal obstruction. On opening the abdomen a very large mesenteric cyst containing forty-two ounces of pure chyle was exposed. The pedicle of the cyst was cut through, the peritoneal edges inverted and stitched, the cyst being removed. The boy died about two hours after the operation. An excessive amount of indican was present in the urine. The diagnostic signs were pointed out to be:—(1) the presence of a cyst in the abdomen, at first laterally placed, but becoming with increasing size more and more central; (2) resonance above, below, and across the tumour (the three "diagnostic signs" of Tillaux), the latter being due to the portion of gut attached to the mesentery involved; and (3) extreme mobility in all directions. The methods of treatment mentioned were:—(1) opening and drainage of the cyst; (2) removal of the cyst by cutting through the layers of peritoneum in the pedicle; and (3) enucleation.

Mr. C. J. WRIGHT showed the Placentæ from a case of Triplets. There was one large placenta with two cords and a second smaller one with one œdematous cord. The amniotic bags were separate. This was the mother's second confinement; she was twenty-five years of age, and was one of a family of thirteen, amongst whom there had been twins on three occasions. Her mother was a twin, and also her grandmother, so that there were multiple births through four generations. The presentations in this case were vertex for No. 1, transverse (delivered by podalic version) for No. 2, and face for No. 3. No. 1 was alive on the fifteenth day; the others died on the eleventh and twelfth days respectively.

Dr. WARDROP GRIFFITH showed a girl, aged seven years, with Transposition of the Heart. There was no transposition of the liver. Cyanosis and dyspnœa had been present from the age of three years. There was cardiac hypertrophy with a loud bruit, with its maximum in the pulmonary area—in this case the third right costal cartilage. Pulmonary stenosis was diagnosed, with possibly a deficiency of the cardiac septum.

EDINBURGH OBSTETRICAL SOCIETY.

Vaginal Hysterectomy.—Interstitial Pregnancy.

A MEETING of this society was held on May 12th. In the absence of the President Dr. JAMES RITCHIE occupied the chair.

Dr. FREELAND BARBOUR read a paper on Vaginal Hysterectomy by Doyen's Method. He said that the first extirpation of the prolapsed uterus for cancer was performed in 1560 by Andreas A. Cruce. The non-prolapsed uterus was removed per vaginam for the first time in 1822 by Santer, of Constance; this patient recovered, but died four months later from pneumonia. In 1828 Blundell also extirpated the cancerous uterus successfully per vaginam; the patient died one year afterwards from cancer of the rectum. A year later Recamier placed the operation on a scientific footing by ligaturing the base of the broad ligaments. The next fifty years were occupied by attention to hysterectomy for fibroids. Extirpation of the uterus for malignant disease was revived in 1878 by Freund, who used the combined abdominal and vaginal operation. In two years, out of ninety-three cases there was a mortality of 73 per cent., which condemned the operation. Czerny, Schrœder, and some others were developing the technique of the vaginal method, and out of thirty-two cases they showed a mortality of only 25 per cent. The vaginal method does not exhaust the patient so much as the abdominal. Even when the ovaries are removed as well as the uterus the patient looks no worse than when a repair of the perineum has been performed. There is no risk of handling the bowels as in the abdominal method, less risk of sepsis, and free drainage is secured. A drawback is the difficulty of reaching the broad ligaments so as to control

the blood-supply. The ligature method is tedious, and, according to Hegar and Kaltenbach, the accompanying hæmorrhage is the chief cause of the mortality in this operation. The clamp method has distinct advantages. It was suggested by M. B. Freund for use in the combined operation. Spencer Wells in 1882 proposed its use in the vaginal operation, and this was put into practice by Jennings a year later. The honour of making the clamp a practical success belongs to Péan and Richelot. Doyen, of Rheims, has used it with great success, introducing new methods, if not also new principles. Péan used the clamp as a temporary or preventive measure, Doyen as a permanent means of arrest. The method of application is also different. Doyen emphasised the advantage of splitting the uterus anteriorly and showed the possibility of temporarily controlling the hæmorrhage by traction on it. The patient is prepared by repeated vaginal douching and packing with iodoform gauze. The cancerous surface should be cleansed as far as possible; some scrape the surface and apply alcohol, so as to lessen the risk of inoculation by cancer cells on fresh-cut surfaces. When the vagina is narrow, as in a nullipara, Doyen previously inserts a dilating bag. The instruments are spatulæ, scissors, strong volsellæ (like bullet forceps), and clamps. The clamps have elastic concave blades, which only meet in their entire length by the use of firm compression. This gives an effective control of all vessels in the broad ligament. Each blade is grooved to prevent slipping. The cervix is caught laterally and drawn down, and a circular incision is made with scissors through the vaginal mucous membrane. Ségend makes a lateral incision in the former, so as to facilitate the separation of the bladder, and in 400 cases has not once injured the ureter. The pouch of Douglas is now cut into by clipping with scissors, carefully guided by the finger, until the peritoneal cavity is reached. If the pouch is obliterated by adhesions the separation of the uterus anteriorly is proceeded with. As soon as the cervix is so far free the uterus is split with the scissors in the middle line anteriorly, the cut margins are caught by volsellæ and more of the uterus pulled down, and the anterior wall still further split until the utero-vesical peritoneum is reached. This is cut through, the scissors inserted, and the opening enlarged by separating the blades. The fundus is seized and pulled out and the clamps are applied. The broad ligament is caught between the finger and thumb or between the index fingers of both hands, the finger tips meeting beyond the base of the ligament, thus ensuring that no intestine is caught in the clamp. The clamp is introduced from the upper margin of the ligament downwards, so that the points of the clamp are at the wound in the fornices. It can be applied alongside of the uterus, or if the appendages are to be removed as well it is placed external to these. A smaller clamp is passed on the inner side of the large one—that is, between it and the uterus for safety. The uterus is then cut away. The handle of the clamp is now turned down so that it is in line with the axis of the vagina; this causes some twisting of the broad ligaments. Iodoform gauze is inserted between the clamps and the ends thrown round the handles of the clamps when these might injuriously press on the vulva. In the after-treatment the bladder should be emptied by the catheter for two days to prevent soiling of the vaginal tampon. Considerable pain is sometimes complained of, much more than after the ligature method has been employed, and can be met by morphia. The large clamp is removed in forty-eight hours, the smaller one twelve hours later. The iodoform gauze is extracted on the following day. A gentle douche can then be given. Usually there is not much discharge, though sloughs may come away, and considerable serous oozing may occur. The vaginal roof is well cicatrised in three weeks, and the patient is then able to go about. This method of operating has several advantages. It allows more rapid operating; the bleeding is all controlled by the traction, and no hæmorrhage is to be attended to until the final stage, when the clamp is applied; the splitting of the uterus allows it to collapse and gives a fresh hold for the forceps; the rotation of the uterus and the application of the clamp from above downwards enable the operator to more certainly get the whole ligament within the bite; the weight of the clamp keeps the broad ligament pedicles down in the vagina, preventing their retraction; the layers of the peritoneum thus become opposed and are adherent above the clamps; and the presence of the clamps favour drainage per vaginam. As compared with the ligature it has a longer convalescence, but this is more than compensated for by the greater rapidity in operating. Dr. Barbour then gave details of six cases upon which he had operated. All recovered. Five of the cases were of malignant disease of the cervix or body; one showed recurrence in three months and another in nine months; one was for prolapsus uteri. Jessett has recorded seventy cases of malignant disease with six deaths. Purcell, who performed the first vaginal hysterectomy in England for cancer, has had sixty-three operations with twelve deaths. In Germany, Fehling has collected the statistics of thirteen operators and found the mortality to be 9·1 per cent. Kaltenbach has operated on 138 cases with a mortality of 3 per cent. Cases suitable for operation only exceptionally present themselves in this country. This is in remarkable contrast to the experience of German operators. The statistics vary as regards non-recurrence. Leopold's statistics show immunity in the case of more than one-half and are very encouraging. Against this is Perri's rather pessimistic estimate that the operation is rather a palliative treatment for a longer or shorter time, the average being one year. The lymphatics play the chief part in the dissemination of cancer. The lymphatics of the uterine body pass through the upper part of the broad ligament to the lumbar glands, receiving on their way those of the ovary and tube. Those from the cervix and upper part of the vagina pass through the lower part of the ligament to the iliac or ileo-pelvic glands. Another chain runs down the round ligament to the inguinal glands. The lumbar glands cannot be palpated; the ileo-pelvic can be examined per vaginam. The inguinal glands are very rarely affected in uterine cancer. Nodules of cancer may be found separate from the original focus, which have grown within the lymphatic vessel from some epithelium carried there by the lymph stream. Mr. Stiles states that the endothelium is not affected by these cancer plugs, and says that a knife once used to cut cancerous tissue should not be used again at the same operation.

Dr. J. C. KYNOCH (Dundee) read notes of a case of Interstitial Pregnancy. The uterus was shown and was submitted to a committee for examination and report.

ROYAL ACADEMY OF MEDICINE IN IRELAND.

SECTION OF OBSTETRICS.

Exhibition of Specimens.—Strangulation of an Intraligamentous Fibro-myoma.—Ergot in Obstetrics.

A MEETING of this section was held on April 23rd, the President, Dr. LOMBE ATTHILL, being in the chair.

Mr. E. HASTINGS TWEEDY showed an Ovarian Cyst with Adhesions.

Dr. ALFRED SMITH showed a large Hæmatosalpinx with hæmatoma of the ovary which he removed from a girl aged twenty years. The external examination, taken with the history of pain, rise of temperature, &c., pointed to an appendicitis. This was negatived by finding on the bimanual examination a large tumour filling the right side of the pelvis. But it was found, while removing the tumour, that the vermiform appendix was adherent to it and lay right across the surface of it. The adhesions were numerous and rather troublesome. Recovery ensued.

Dr. W. J. SMYLY showed an Ovarian Tumour and Carcinomatous Uterus.

Dr. ALFRED SMITH and Mr. M'ARDLE read notes on a case of Broad-ligament Myoma Strangulated by Protrusion through the Inguinal Canal, and exhibited the specimen. Dr. Alfred Smith saw the case in consultation with Mr. M'Ardle, who demonstrated the large hernial opening and the tumour. The history of pregnancy, the appearance of the tumour, and its elastic feel gave the impression that the case was one of ectopic gestation, probably in the cornua of a uterus bicornis; and accordingly Dr. Smith, by permission of Mr. M'Ardle, performed abdominal section. He noticed that the handling of the tumour did not cause any rhythmic contractions. On closer inspection he found that he could differentiate two masses; one was more or less pedunculated, and was evidently the portion that had descended into the hernial sac, and the other filled the right side of the pelvis and was firmly wedged there. The two

masses were united together by a broad base. He incised the capsule to determine the nature of the contents, and found it was not a cyst, but a soft œdematous tumour, the tissue of which tore easily with the finger; he then removed the pedunculated lobe, and rapidly enucleated the remaining portion out of the fold of the broad ligament. Professor McWeeney reported the specimen as an intra-ligamentous fibroid undergoing mucoid degeneration. The points of interest were as follows: (1) the difficulty in diagnosing the tumour; and (2) the presence of an intra-ligamentous uterine fibroid in an inguinal hernial sac. The patient's recovery was rapid.—Dr. E. WINIFRED DICKSON asked if there was any bowel down together with the tumour, or if only the tumour was strangulated.—Dr. SMYLY asked if the tumour was connected with the round ligament. It would appear to him to be a likely origin of growth. He also asked why a new opening was made in the abdominal wall instead of enlarging the existing one.—Mr. M'ARDLE, in reply, said that there was no bowel down along with the tumour. It was the second time that stercoraceous vomiting had come under his notice in connexion with troubles in close proximity to the end of the ileum. He referred to a case where an œdematous ovarian tumour had pressed on the ileum causing spasm, which produced obstruction. With regard to Dr. Smyly's question about the second opening, he (Mr. M'Ardle) said that he had avoided any incision which would endanger the deep epigastric artery as well as the arteries of the rectus muscle, the patient having been for a considerable time under chloroform. Also, it was impossible to get inwards because the tumour was so large, crushing the uterus to the left side.—Dr. SMITH, in reply, said that he thought at first he had to deal with a uterus bicornis. He found that the round ligament was apparently quite right on each side.

Dr. T. MORE MADDEN read a paper on the use and abuse of ergot in obstetrics, which will be found on page 1462 of this issue.

Reviews and Notices of Books.

Atlas of Human Histology. By Dr. ARNOLD BRASS (Göttingen). With Explanatory Notes. Translated from the German by R. A. YOUNG, M.D., B.Sc. London: Baillière, Tindall, and Cox. 1897. Sixty plates engraved and printed in colours. Large 4to. Price 31*s.* 6*d.* nett.

WE have much pleasure in calling attention to this most beautiful and artistic atlas, in the production of which no pains seem to have been spared. The sixty plates contain nearly 500 coloured drawings of the various tissues and organs of the body, which could hardly be surpassed for clearness and fidelity. The sections from which they have been taken have been lent by many of the most eminent Continental pathologists, and, being obtained chiefly from newly-born infants and recently executed criminals, give a more accurate representation of human histology than most current works in this country, where the histologist has to rely largely on the lower animals for fresh specimens. The reproduction has been most efficiently done, the process having been carried out by Dr. Brass himself. Very fine plates are given showing the structure of the cell and of the principal tissues, and then the various systems of organs are taken up in their order. The sections on which most labour has been expended are those on the Sense Organs and on the Central Nervous System, and we know of no work in which such complete illustration of these organs is given. The beautiful effects obtained by the gold chloride method in the case of the cutaneous sense organs and by the Golgi silver process and by Nissl's aniline method in the central nervous organs are most faithfully reproduced. The intimate structures of the internal ear, of the eye, and of the medulla oblongata are most artistically and faithfully reproduced. The section on the Alimentary Canal is also very good and complete, but the section on the Structure of the Lung is very inadequate, and the section on the Blood is disappointing in view of the great advances that have been made in that department in recent years. But with these exceptions it is impossible to speak except in terms of the highest praise of the work. The plates are accompanied by concise descriptions of the drawings, which have been translated into excellent English by Dr. Young; the book is portable and well bound, is produced at a reasonable price, and will no doubt have a large sale among both teachers and students.

A Course of Practical Histology. By E. A. SCHÄFER, LL.D., F.R.S. Second Edition. London: Smith, Elder, and Co. 1897. 290 pp. Price 7*s.* 6*d.*

THIS book contains in a concise and portable form a vast amount of accurate information presented in a clear and well-arranged manner. After a short but adequate account of the methods of embedding, cutting sections, and drawing the appearances seen under the microscope, the devices for observing the blood under varying conditions of temperature are very fully described. A consideration of the methods for exhibiting the details of structure of the elementary tissues and of the organs of the body occupies the rest of the book. Professor Schäfer wisely avoids giving a heterogeneous jumble of methods which are multiplying daily, but selects those which he has found to give the best results, or which are of the most general applicability. The standard of excellence is throughout very high, and this is especially conspicuous in the important sections dealing with the blood and with the peripheral and central sense organs. No description of the histological appearances is given, the whole book being devoted to practical directions for the student's own investigations. The work can be very strongly recommended as being thoroughly up to date, accurate, and so clearly written that no difficulty should be experienced in following out the instructions given.

LIBRARY TABLE.

Aids to Bacteriology. By T. H. PEARMAIN and C. G. MOOR, M.A. London: Baillière, Tindall, and Cox. 150 pp. Price 3*s.* 6*d.* 1897.—This is an admirable presentation of the outlines of bacteriology. The necessary apparatus is fully described, although unfortunately not illustrated, and the methods of cultivation and staining are clearly given, the authors wisely giving only a limited number of methods, but giving those in such detail as to make it easy for anyone to follow out the processes. There is an excellent account of disinfection, of immunity, and of the preparation of diphtheria antitoxin and of Haffkine's cholera vaccine. The characters of the chief pathogenic and non-pathogenic organisms, both under the microscope, and when growing on various culture media are systematically described. The little work is well up to date, and the authors have succeeded in giving the most clear and useful account of this important subject in brief form with which we are acquainted.

Life in West London. By ARTHUR SHERWELL. Second Edition; with a supplementary chapter. London: Methuen and Co. 1897. Pp. 202, price 2*s.* 6*d.*—In our review of the first edition of this book we remarked that Mr. Sherwell did not suggest any remedies for the state of matters he described, but in the supplementary chapter to the second edition he repairs this omission. What is imperatively needed, he says, "is not fresh charitable enterprise, but enthusiastic and intelligent personal service, working ..... along the lines of existing agencies, but supplementing these, where necessary, by other careful and well-approved forms of social help." More voluntary workers is the cry of a great number of those who are set over their fellows in one capacity or another, and voluntary workers are just the hardest class

of workers to procure owing to the exigencies of modern life. If we had some kind of organisation analogous to the Florentine Brothers of Mercy, or the association described by Mr. Adderley in "Stephen Remarx" we should be a long way towards the solution of the problem, but at present we are far from the goal. Mr. Sherwell suggests the formation of a small but expert "watch committee" to report upon cases of overcrowding; this is a measure which might easily be brought about. His second suggestion he owns is a most difficult one to carry out—namely, that "fashion" with regard to its malign influence upon seasonable trade should be resisted, but how this point is to be gained we must confess we do not see. Thirdly, he wishes for the establishment of well-conducted and rational places of amusement. That it will be a long time before any of these suggestions are got into working order we have no doubt, but the mere fact that some one has formulated the kind of thing wanted is no small step towards such a desirable end.

The Climate of Bournemouth in Relation to Disease, especially Phthisis. By A. KINSEY-MORGAN, M.D. Durh., Honorary Medical Officer, Royal Victoria Hospital, Bournemouth. Bristol: John Wright and Co. London: Simpkin, Marshall, and Co. 1897. Pp. 51.—The dryness of its sandy soil and the mildness of its climate give Bournemouth a prominent position among English health resorts, especially among those recommended for the residence of sufferers from pulmonary complaints. The sea frontage, the luxuriant pine woods in the immediate vicinity, and the care which has been bestowed on the drainage, all conduce to the salubrity of the atmosphere, while the anxiety of the townspeople to meet the requirements of invalid visitors is shown by the facts that the "Mont Dore cure" can be applied all the year round, that every form of "water cure" is obtainable, and that the open-air treatment of phthisis, as practised at Falkenstein and elsewhere on the continent, is being systematically put in force. With respect to the cure of phthisis in its early stages Dr. Kinsey-Morgan writes quite hopefully.

Several Selected Remedies against Plague and Suggestions for its Treatment. By A. PEREIRA. Bombay: Printed at the "Tatvavivechaka" Press. 1897. Pp. 31. Price 8 annas.—The Materia Medica described by Mr. Pereira in this pamphlet differ considerably from that which was recognised by his celebrated namesake, Dr. Jonathan Pereira. The work is not original, but is a translation from a Portuguese book entitled "Remedios contra Peste," published by Dr. Helvecio in 1747. The remedy from which most is expected is the "tincture of gold" made by dissolving 48 grains of chloride of gold in 1 oz. of rectified spirit; the dose is from six to ten minims. Many other medicines, however, are mentioned, pig's gall and viper broth included.

A Manual of Medical Exercises. By PERCY G. LEWIS M.D. London: John Bale and Sons. 1897. Pp. 50. Price 2*s.*—This little book was written for the use of Dr. Lewis's patients who attend the Folkestone Medical Gymnasium. It can be recommended as giving clearly expressed and ample directions for the performance of a number of gymnastic exercises, some of them without any apparatus, and others with the aid of such gymnasium appliances as Dowd's machines, ladders, dumb-bells, the trapeze, &c.

Year-book of the Scientific and Learned Societies of Great Britain and Ireland. London: Charles Griffin and Co 1897. Pp. 270. Price 7*s.* 6*d.*—This useful and, to many persons, indispensable work of reference has now reached its fourteenth year of issue. The societies treated of are classified according to their various objects in fourteen departments, some of which are "Science Generally," "Chemistry and Photography," "Biology, Microscopy, and Anthropology," "Psychology," "Medicine," &c. The names of the officers, the places and dates of meeting, the terms of membership, and lists of the papers read during 1896 are given, together with the names of their authors. The total number of societies included in the volume is upwards of a thousand; the medical societies occupy forty-five pages.

JOURNALS AND REVIEWS.

The Journal of Physiology. Edited by MICHAEL FOSTER, M.D. Lond., F.R.S., and J. N. LANGLEY, Sc.D., F.R.S. Vol. XXI. Nos. 4 and 5. London: C. J. Clay and Sons. Price 13*s.*—The articles contained in this part are thirteen in number. The first is by Arthur Cushny and S. A. Matthews on the Effects of Electrical Stimulation of the Mammalian Heart, with fifteen figures in the text. The authors give tracings showing the effects of stimulation of the heart at different periods of its action and when applied to different parts. 2. G. J. Burch: A Description of an Inductor Alternator for Physiological Experiments, with two figures in the text. 3. M. I. Newbigin: The Pigments of the Decapod Crustacea. 4. Herbert S. Jennings: Studies on Reactions to Stimuli in Unicellular Organisms especially dealing with Reactions to Chemical, Osmotic, and Mechanical Stimuli in the Ciliate Infusoria, with twenty-two figures in the text. 5. L. Hill and H. Barnard: On the Influence of Gravity on the Circulation. 6. T. G. Brodie and S. W. F. Richardson: On the Changes in Length of Striated Muscle under varying Loads brought about by the Influence of Heat, with thirty-eight figures in the text. 7. B. Moore and D. P. Rockwood: On the Reaction of the Intestine in Relationship to Intestinal Digestion. 8. B. Moore: On the Chromogen and on the Active Physiological Substance of the Suprarenal Gland. 9. T. G. Brodie and A. E. Russell: The Enumeration of Blood Platelets. They give the number 635,300 per cubic millimetres, or an average of 1: 8·5 of red corpuscles. 10. O. F. F. Grünbaum: On Intermittent Stimulation of the Retina, Part I., with three figures in the text. 11. T. G. Brodie and A. E. Russell: The Determination of the Coagulation-time of Blood, with one figure in the text. 12. E. Waymouth Reid: A Comparison of the Diffusion into Serum and Absorption by the Intestine of Peptone and Glucose, with one figure in the text. 13. E. J. Burch: An account of Certain Phenomena of Colour Vision with Intermittent Light.

Revue Philanthropique.—This is a new monthly journal of 160 pages, conducted by M. Paul Strauss, and published by Masson et Cie., Boulevard Saint-Germain, Paris. Among the twelve original articles an important one on the protection of children is contributed by M. Theophile Roussel, who has already been mentioned in our columns[1] as the promoter of the French law by which Government officials are appointed to look after persons having the care of young children not their own. Dr. Pierre Budin writes on the feeding of infants, recommending, first, suckling by the mother; secondly, suckling by a wet nurse; and failing either of these, feeding with sterilised cow's milk, generally without addition of water. Dr. H. Thulié discusses the methods of dealing with juveniles who have more or less bias towards evil courses and are in danger of becoming criminals. He considers that such persons, although not by any means imbecile, are the subject of mental infirmity, due, among other causes, to one or both of the parents being intoxicated at the time of conception.

Birmingham Medical Review.—The opening paper is by Mr. D. C. Lloyd Owen, the subject being Pain in Eye Disease. It contains many useful practical hints. Mr. Lawson Tait

[1] THE LANCET, Oct. 24th, 1896, p. 1191, and Oct. 31st, 1896, p. 1263.

discusses the question, Was Robert Houston of Glasgow the first Ovariotomist? His opinion is "that Robert Houston's case (1701) was an ovariotomy in every sense of the term, and that (be it of interest and importance or not) it is the first case of that operation of which we have any record." He has occasionally met with ovarian cysts corresponding exactly to the description given by Houston of the one on which he operated; their contents are gelatinous or viscous, "will not flow through any trochar, and can be induced to get out of any sized wound only with the greatest difficulty. ..... When the abdomen is cleared, and the process is a long one, the cyst is found to be a movable bundle of shreds with a vague pelvic attachment ..... in some six or eight cases, so far as my memory serves me, there was nothing left to tie." This explains why Houston did not tie the pedicle, and Mr. Tait takes the opportunity of correcting the opinion he expressed in 1883 to the effect that he (Houston) must have seen it and tied it.

Edinburgh Medical Journal.—The opening article is a lecture on Endocarditis, delivered by Dr. Lauder Brunton. The diagnosis of this disease is based mainly on the temperature chart; when the temperature resembles that of quotidian ague, without there being any evidence of either malaria or suppuration, the case is probably endocarditis, even though there is no cardiac murmur. Dr. P. McBride and Dr. A. Logan Turner continue their papers on Naso-pharyngeal Adenoids. Altogether there are ten original contributions.

Dublin Journal of Medical Science.—An interesting and very detailed account of a case of Angina Pectoris is given by Dr. John Knott. Dr. T. P. C. Kirkpatrick has a paper on the Spread of Tuberculosis by the Milk-supply, in the course of which he refers to Professor McFadyean's observation that tuberculin is not a reliable test in the case of cattle standing in open sheds, in the slaughter-houses, and exposed to excitement.

Scottish Medical and Surgical Journal.—The principal paper is by Dr. Byrom Bramwell, being a clinical lecture on a case of Chronic Pneumonia due to the Pressure of a Small Aneurysm on the Left Bronchus. Mr. David Wallace writes on the importance of Asepsis in Urinary Surgery, giving a history of the development of opinion on the subject and an account of a case of Septic Infection which terminated in recovery. He considers that purification of instruments is insufficient to prevent sepsis. Dr. William Russell, the editor, contributes two cases of Pleural Effusion without characteristic symptoms and two of chest pain, one of which was attended by extreme surface tenderness.

New Inventions.

AN AUTOMATIC DISINFECTOR.

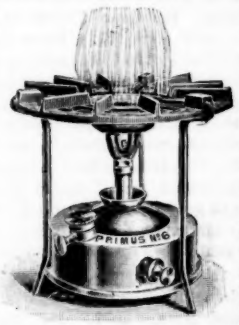
THIS is an ingenious and simple arrangement for attaching to the pipe down which the water travels from the cistern to the closet for flushing purposes. A hole is first made in the wall of the pipe with a drill that is provided. Next, a brass tube provided with a screw clamp and washers is inserted into the hole so made. A brass collar is then placed round the waterpipe, which holds the brass tube in position. It is then screwed up and clamped firmly. The tube thus inserted into the flush-pipe then takes a right angle ending in a brass tube about 7 in. long, which is immersed in a disinfecting fluid. The fluid recommended for this purpose is Esset's fluid, which is a cresylic resinous compound, giving with water a milky emulsion. By means of a tap attached to the tube which dips into the bottle the amount of fluid sucked into the water as it descends from the cistern into the closet-pan may be adjusted to a nicety. Once the tube is attached to the pipe and placed in position no further attention is needed. All that is necessary is to replace the bottle when empty with one that is full or to fill the empty one with fresh disinfectant. Other disinfecting agents might, of course, be substituted. We regard this apparatus as a useful and handy sanitary adjunct. It possesses the distinct advantage that it is always possible to see whether it is acting properly or not. The specimen we examined was submitted to us by Messrs. A. Granville and Co., 102, High-street, Battersea, London, S.W.

THE PERFECTION ENVELOPE.

WE have frequently animadverted upon the objectionable practice of moistening with the tongue the gum of stamps and of envelopes. This objectionable method in regard to the latter may to some extent be overcome by the use of the "Perfection Envelope," on which the gum is stuck, not on the flap itself, but on the portion of the envelope to which it becomes attached. Thus the flap contains no gum. It seems to us that the same end might be attained if the person decided to lick that part of the envelope where the flap falls, instead of the flap. On the whole, however, it is, perhaps, more convenient (if the tongue must be employed) to moisten the flap, and the gumless flap, but gummed envelope, which Messrs. J. Walker and Co., Limited, Farringdon House, Warwick-lane, E.C., have recently introduced will secure this advantage.

A WICKLESS OIL STOVE WITH SMOKELESS FLAME.

THE production of a practically colourless and smokeless flame from ordinary paraffin oil is an attainment of some importance. Considering the enormous amount of carbon in ordinary petroleum as compared with the amount in coal gas, the fact that the flame may be converted from a white sooty flame into a flame possessing the exact characteristics of the ordinary Bunsen gas flame is somewhat surprising. Still, it has been done with complete success in the oil stove which is represented in the accompanying illustration. The stove, as will be seen, consists of a large reservoir provided with an opening for filling, which can be closed quite air-tight, and, if need be, opened a little by means of a screw valve. At another part of the reservoir is attached a small air-pump for creating a slight pressure upon the oil. At the foot of the burner will be noticed a small cup. To start the lamp working, this cup is filled with methylated spirit and ignited. This creates expansion, and causes pressure to act upon the oil in the reservoir, the oil thus ascending by means of a dip pipe up the central tube, where, arriving at the heated portion, it is vapourised. At the same time air is sucked in by injection action, so producing a true Bunsen oil flame. When the spirit has burnt out a few strokes of the pump are made to increase the size of the flame as may be desired. Similarly the flame may be lowered by opening the air screw attached to the filling valve, any excessive pressure being thus relieved at will. Once, however, the size of the flame is regulated, it proceeds to burn regularly with little noise and requiring little further attention. The flame has an inner strong blue cone and is quite free from smoke; it is very hot and will boil a pint of water in a remarkably short space of time. Except at the start it is free from smell. It is admirably adapted for all cooking purposes, and particularly grilling. The stove is known as the Primu No. 6, and may be obtained from Messrs. Moeller and Condrup, of 78, Fore-street, London, E.C.



THE LANCET.

LONDON: SATURDAY, MAY 29, 1897.

A REPORT issued a short time since by the Local Government Board has to do with the question of restricting attendances in elementary schools on the occurrence of diphtheria. It is compiled by Dr. SWEETING, and it shows, perhaps more clearly than any other recent document, how little is known and understood as to the circumstances under which local authorities and their officers have the right and power to intervene in matters of local school attendances for the purpose of preventing the spread of infectious disease. Diphtheria was prevalent at Gillingham to the north-east of Rochester; the population was about 31,000, and in two quarters of the year 144 cases and 51 deaths from that disease had occurred. It is not our purpose on this occasion to deal with the etiology of the disease or with its relations to Chatham and Rochester which are near by; but it seems clear that, as is so commonly the case, the spread of the disease was favoured by attendance at elementary schools, and it is interesting to note how this was dealt with, especially in the case of one school which seemed to be primarily concerned with the diffusion of the infection.

First came a verbal intimation by the medical officer of health to the chairman of the School Board to the effect that the closure of the school was necessary. The grounds on which this advice was given cannot be questioned; the advice was complied with for a period of a fortnight, and further extension of the closure was made for a third week. Then the School Board moved a resolution that the closure was "unreasonable," and what was regarded as a "vote of censure" on the medical officer of health was passed. Soon after the school was re-opened. The first stage of mismanagement which brought about the results referred to relates to the method of procedure adopted. No one can maintain that it is not proper for a medical officer of health to give advice to the parties primarily concerned with a view of checking the spread of an infectious disease, and the method adopted by the health officer in this case was probably the one which was likely to bring about the school closure in the most speedy way. It is also one that is very commonly adopted. But at the same time it is desirable for health officers to remember that such advice is in no way binding upon those to whom it is given; and, even when the advice is acted on, it is important that the matter should at once be placed on a legal footing. The law as it stands is embodied in the Education Code, and the clause in question runs as follows: "The managers must at once comply with any notice of the sanitary authority of the district in which the school is situated, or any two members thereof, acting on the advice of the medical officer of health, requiring them for a specified time, with a view to preventing the spread of disease, or any danger to health likely to arise from the condition of the school, either to close the school or to exclude any scholars from attendance, but after complying they may appeal to the department if they consider the notice to be unreasonable." Thus it will be seen that mere advice from the health officer to the school authorities is in no sense binding; indeed, it finds no place in the enactment or code: and even in cases where the health officer thinks it desirable to give such advice to the school authorities he should always proceed to advise the sanitary authority or any two of their number, in order that they, not he, should order the closure of the school for a specified time. Closure under those circumstances is binding and must be carried out, even if appeal is made to the Education Department. The actual duty and power of the medical officer of health is limited to advising his authority, and in most cases of school closure it is best that he should limit himself to it. If he does not, and the school authorities close their school on his verbal advice alone, they have no authorised certificate enabling them to claim the Government grant, notwithstanding the suspension of school operations. And not only so, but the moment the health officer begins to advise school authorities and officials, these latter come to think that they have a right to seek his advice and even to demand it in matters relating to the health of their school and even of their scholars. In fact, in this Gillingham case the School Board next went on to ask for lists of persons suffering from infectious disease, and the fact that they did not get this information had doubtless something, at least, to do with the so-called vote of censure passed on the medical officer of health, an officer with whom they had no official concern whatever. In other cases of a somewhat similar character the School Board have claimed to be advised by the health officer individually not only as to when their school or schools may be re-opened, but also as to the health of particular scholars, so that they might know whether, in the interests of the school, these scholars should or should not be allowed to resume attendance at school. All this is quite irregular; the School Boards have no more claim to the private medical advice of the medical officer of health than they have to that of any other medical practitioner. If they, for educational purposes, need such advice and counsel, they should pay for it just as any other body would do. But it is the irregular action of medical officers of health themselves which has led, in the main, to the existing unsatisfactory state of affairs; and it is most important that in the matter of school closure their advice should always be given to the sanitary authorities who, in turn, should order the school to be closed for a specified time, after which it would naturally be re-opened provided no fresh closure were enforced on the advice of the health officer.

A similar remark applies to the question of excluding children from certain houses or localities in place of entirely closing the school. School authorities often prefer closure under a certificate of the sanitary authority to the exclusion of scholars; because they think it more difficult to get the grant under the exclusion system. In one sense it is, for they so often exclude scholars on the mere verbal advice of the health officer; whereas the Education Department will take no verbal statement when the question of grant arises. In the case of exclusion the certificate of a medical practitioner is enough; but when the medical practitioner in

question is the medical officer of health it is always better that he should get the order for exclusion issued under the section we have quoted, and it can be so worded that it will serve for any house or locality in which the disease exists or may appear, thus avoiding multiple notices in case the malady extends. Much trouble has arisen from failure to comply with the precise terms of the Education Code. As a rule the simpler, but irregular, plan is adopted to please the schoolmaster or some school manager; but when these school officials find that their grant is at stake by reason of the irregular action, they do not hesitate to complain that it is the fault of the medical officer of health, and they make unreasonable demands on him for documents and for action which they have no right to claim. It may at times be inconvenient not to advise the managers directly, but if a medical officer of health feels this and does advise them he should forthwith proceed to get his advice endorsed and legalised by action through the sanitary authority.

IT may be affirmed without fear of contradiction that the value of prompt surgical intervention in acute abdominal disease can hardly be more clearly shown than in the treatment of perityphlitis, now universally admitted to depend on inflammation and ulceration of the appendix vermiformis. It has been proved in numberless instances that by such intervention peritonitis has been averted, or checked in its spread, and there can be no question that lives have been saved by this means. On the other hand, it is equally certain that lives have been sacrificed by unavoidable delay in having recourse to this radical measure. In spite of this general feeling of the necessity for resort to surgical aid, and the frequency with which it is sought, it is yet surely true that in the days before there was any idea of invoking the aid of surgery the disease was not characterised by any very great mortality. The lines of treatment were simple, and under their adoption the acute manifestations passed gradually away, in the majority of cases perhaps never to return, though in a certain proportion of cases symptoms recurred at intervals under slight provocation. It is true, however, that this fortunate result was varied by cases where peritoneal or extra-peritoneal suppurations placed life in jeopardy or were responsible for a long and weary illness that only ended in death, and there were also the cases of perforative peritonitis which hardly come under the category that we are now considering, but fatalities from which may certainly be obviated by surgical procedure.

The impunity with which the surgeon can now fearlessly lay open the abdomen, and the satisfaction felt at the discovery of a gangrenous appendix and its removal has, perhaps, rather led us to despise the *vis medicatrix* that must in past days have often effected a radical cure. It all turns on the old question whether the slow and somewhat hazardous processes of nature are not better replaced by the rapid measures of the art of surgery, the whole aim and purpose of which is to anticipate the development of greater ill, which may eventuate if the disease is left to itself. We have no intention here to discuss the indications for interference; we might even admit that the operation can be justified in every case, even the mildest. But as exhibiting the other side of the question, we would draw attention to a paper by Dr. KLEINWÄCHTER, of Breslau, a former clinical assistant of the late Professor BIERMER, who relates the experiences of the medical treatment of perityphlitis in that physician's wards in the years 1874 to 1889[1]—that is, in the pre-chirurgical days of the treatment of this affection. Dr. KLEINWÄCHTER observes that in spite of the gratitude owing to surgeons for their researches on the subject, and the striking results that often ensue from their operations, it is difficult for the physician to admit that a disease which can, in the majority of cases, resolve without the aid of surgery should come to be considered as falling exclusively into its domain. He suggests that the only way to prove the necessity for this transference is by comparative statistics, and for that reason he has collected and tabulated details of the cases in Professor BIERMER'S clinic during the period named, none of which were treated otherwise than on medical principles. These principles aim at obtaining complete rest of the intestinal canal by the strictest attention to rest of body and to diet, as well as by the administration of opium. In more detail he describes the treatment as consisting in keeping the patient absolutely at rest in bed and the relief of the pain and fever by the application of iced water compresses or an ice-bag to the abdomen, the cold being replaced by warm applications as soon as the fever subsides and signs of exudation appear. From the outset opium or morphia is administered, no matter whether there be diarrhœa or constipation. Professor BIERMER took as guides for the continuance of the opium treatment the presence of pain and tenderness and of abdominal distension, for whenever the colic recurred the patient was allowed to have another dose. Dr. KLEINWÄCHTER has known the administration of opium to have been continued for fourteen and even twenty-five days, and states that the resulting constipation was well borne, whilst other disagreeable symptoms, as hiccough, vomiting, and cough, were mostly controlled by the drug. Restriction to a fluid diet of minimal proportions is a necessity; where there is a tendency to vomit and much thirst only ice is allowed, and gradually rice-water, lemonade, diluted red wine, then thin broth, and finally milk. The opium can be omitted when pain no longer recurs and the abdominal tension does not increase, but it must be resumed on the slightest return of pain. The bowels usually begin to act spontaneously from the fourth to the ninth day, and after two or three such actions they must be assisted by enemata or mild saline aperients, as Bilin, Tarasp, or Carlsbad water. Much care is to be observed in the diet subsequently to the attack, and the patient should always be able to have recourse to a dose of opium, if at any time afterwards there is a return of colic. Should there remain any resistance in the ileo-cæcal region, due probably to adhesions or residues of exudation, it is recommended to continue the use of wet compresses and of warm baths. If the condition of the patient grow worse, the abdominal distension increase, the breathing quicken, and the pulse become more rapid, then the opium is still further pushed or replaced by morphia, the force of the heart being maintained. Professor BIERMER was careful

[1] Mittheilungen aus den Grenzgebieten der Medizin und Chirurgie. Erster Band, Fünftes Heft. Jena: G. Fischer, 1896.

to refrain from large injections or lavage of the stomach or intestinal puncture to relieve distension.

If the foregoing be a correct account of Professor BIERMER'S practice, it will be seen to have mainly relied upon the prescription of opium, carried to an extent now rarely considered advisable, and that, too, manifestly when the case was assuming the features of general peritonitis. At the present day in most acute inflammatory abdominal diseases the free use of opium is rather deprecated, as tending to mask the symptoms and delay the intervention of surgery until all reasonable prospect of relief by this latter means is passed. It will, therefore, come as a surprise to many to learn that out of a total of 112 perityphlitic cases (3 of which relapsed) so treated in Professor BIERMER'S clinic, only 2 died—a case-mortality of 1·78 per cent. One of these fatal cases had the ordinary characteristics of perityphlitis and had progressed so far that the opium was left off, when, on the following day, after a sudden evacuation, a fatal coma supervened. The other, severe from the first, succumbed on the ninth day to diffuse peritonitis. All the rest recovered. Particulars were obtained of the after-history (up to 1889-90) of 70 of those patients who left the hospital—namely, of 61 out of 98 who left it "well" and 9 out of twelve who were discharged "relieved." Relapses had occurred in 17, or 24·3 per cent., and 2 of these were fatal. In 5 cases many recurrences had taken place, but in not a single one had the relapse supervened later than two years from the date of the primary attack.

These figures, which, it must be remembered, are culled from the practice of one hospital physician, and therefore may be taken as being based on a consistent line of treatment, are surely deserving of attention; for, although there is, even amongst the most successful operators, a commendable recognition of the fact that in the majority of cases of appendicitis resolution may occur, there is still great uncertainty as to how far it is either right or justifiable to pursue purely medical treatment. The position is one of great delicacy and difficulty; for, in contrast to these figures, we have the statistics of St. Thomas's Hospital, given by Dr. HAWKINS in his excellent monograph, which show that the general mortality from appendicitis amongst 264 cases was 14 per cent., or 26 per cent. of those terminating in abscess and 75 per cent. of those ending in general peritonitis. It is possible that had Dr. KLEINWÄCHTER been able to trace out all Professor BIERMER'S patients that the mortality from recurrence would have been found to have risen, and each such case may be reckoned as one that might have been saved by a primary operation. But then, as in many the primary attack might not have been of the severity held to justify such interference, no comparative conclusion regarding medical and surgical treatment can be drawn from them. Nor since few, if any, advocate the removal of the appendix as a routine measure do we seem to be able to institute any comparison—at least, a statistical one—between the surgical and the medical method of dealing with the disease. The claim for the treatment adopted by Professor BIERMER must then rest, not merely on its being followed by a diminished mortality, but in its favouring resolution and averting suppuration, which is, in some cases, the inevitable outcome of the lesion of the appendix. It requires more courage to act up to this belief than most of us possess now that we have become more intimately acquainted with the nature of the underlying lesion, and the possible risk entailed by delay in having recourse to surgery. Therefore, although we cannot but admire the remarkable results which we owe to the industry of Dr. KLEINWÄCHTER, we the more incline to the opinion expressed in a recent text-book[2]: "As soon as the diagnosis of appendicitis is established, indeed, pending its settlement, a competent surgeon should be associated with the physician, for the reason that in the vast majority of cases operative treatment is sooner or later demanded, while the hour for such treatment is best settled by daily conference."

A CONFERENCE was held last week at St. Martin's Town Hall, at the instance of the British Committee for the abolition of the State Regulation of Vice, for the purpose of devising measures to prevent the revival of any such regulations. It was largely attended, a considerable number of ladies being present. Mr. WALTER S. B. M'LAREN presided, Mr. JAMES STUART, M.P., being the principal speaker, and Sir JAMES STANSFELD and several ladies also taking part in the discussion. We can quite understand that the opponents of all useful and practical attempts to deal with the existing condition of things are uneasy at the great change which has of late been taking place in the state of public feeling, but we do not see how any amount of talk can alter the facts. The report of the Departmental Committee, of which the Earl of ONSLOW was the President, still remains unshaken in the contentious storm. Is there any reason to suppose that moral methods of dealing with the causes of immorality are, or need be, neglected, or that chaplains and officers (medical or otherwise) are utterly unconcerned with the moral welfare of soldiers under their charge and so neglectful of any attempt to impress on them that it is the duty of a soldier of the QUEEN to lead a good life, as was tacitly assumed to be the case by some of the speakers at the conference? How many of those who took part in the meeting have any practical acquaintance with the army or with soldiers? How many of them have really considered the history of the past and present time in regard to the subject of which they were speaking? But it is as futile to argue with people who will not face the facts as it is to attempt to stop the rising tide. Of course, Lady HENRY SOMERSET is regarded as having "given herself away," and her line of action—apparently because it was an independent one—has been emphatically repudiated. But what have they to say with regard to the influentially signed women's memorial, which expressed an earnest hope that the Government would take such steps as may be necessary to prevent the spread of disease in our army in India? The first three signatories are Princess CHRISTIAN, the Duchess of CONNAUGHT, and Princess MARY of TECK, and associated with them are many ladies of distinction, and the matrons of every large hospital in the metropolis. Miss FLORENCE NIGHTINGALE and Mrs. HUMPHRY WARD are also amongst those who have signed the document.

[2] The Practice of Medicine, by James Tyson, M.D. Manchester J. K. King and Son. 1896, p. 506.

The women's memorial respecting the health of the army, the text of which was published in the *Times* of the 25th instant, strikes us—as it must, we think strike everyone who reads it—as a well-considered document. We applaud the courage which the signatories have exhibited in taking any part in so distasteful a subject, and we believe that their motives and reasons for doing so, as set forth in their memorial, will be gratefully recognised by all sensible people.

Lord GEORGE HAMILTON and Lord LANSDOWNE have been studiously moderate and guarded in their proposals, and in the statement of their reasons for making them; indeed, many people think that they have, on this very account, rendered the task imposed upon the Indian Government a most difficult one. It is, however, we fear, hopeless to expect that even the most fastidious regard for the moral and ethical side of the question will satisfy those whose opposition to all practical attempts to limit contagion in respect of these diseases is fanatical. We are almost tempted to ask whether it has ever occurred to some of these enthusiastic persons that they are practically bringing an indictment against the Creator for having constituted men and animals with a reproductive system, seeing the evils that are chargeable to it.

Annotations.

"Ne quid nimis."

A NEW METROPOLITAN WATER COMPANIES' BILL.

IT is true that London must wait until another Royal Commission has delivered its pronouncement upon certain subjects of controversy in connexion with the London water-supply before any definite solution of the whole question in its bearing upon municipal administration can be hoped for. But the Bill which Mr. Chaplin introduced on Tuesday last, and which was read for the first time, is a step in the right direction. Briefly, it helps the consumer so far as to enable him to secure the aid of a constituted body in the event of a grievance or unjust treatment at the hands of the water company. As matters now stand the consumer can only appeal when he finds himself in conflict with the water company to a magistrate or to the Local Government Board. In either case considerable trouble besides expense is involved, and very frequently the consumer's action is absolutely without fruit because of objections which are raised, and successfully so, as technically valid. Mr. Chaplin now proposes, pending the result of the labours of the Commission, to appoint as a tribunal in these matters the Railway and Canal Commissioners. This is rather a neat expedient, since this body is not, as it was remarked, overburdened with work, while it is clearly not desirable to create an entirely new board of reference for the purpose of giving effect to what must be only a temporary measure until the Royal Commission has drawn up its conclusions. We see in this Bill promise of the fulfilment of an undertaking, tentative though it may be, which Mr. Chaplin gave soon after the assembling of Parliament in the present session.

THE ARMY MEDICAL SERVICE.

WE would call attention to the announcement that appeared in the naval and military intelligence column of the *Times* of the 25th inst. in regard to the Army Medical Service and medical officers of the militia. The changes about to take place have an important bearing on the future of the medical service. The Army Medical Staff—and, it may be added, the army generally—are, we think, to be congratulated on the material advantages that have been gained, and on the disposition which the concessions indicate of a desire on the part of the War Office authorities to redress the grievances of which medical officers complain. It cannot be for the good of the army or the medical service that frequent changes of medical officers should take place, and that those in the administrative ranks should not remain for some time in the military districts of which they have medical charge. It may add to the difficulties of direction at headquarters, but continuity of army medical administration is most desirable on the score alike of service efficiency and individual comfort. The reduction of the length of tours on foreign service, special leave for the purpose of professional studies, and greater facilities for obtaining private leave on the part of medical officers, as well as their taking their proper position according to their army rank on all boards, committees, &c., where their presence is required, are changes so obviously right and fair that they should not stand in need of any advocacy. The announcement in the *Times* is as follows: "The continuity of army medical administration in military districts will in future be placed upon a stronger basis by the retention of surgeon-major-generals and surgeon-colonels in their staff appointments as principal medical officers until they vacate that position by promotion or retirement. The length of a tour of service in India, the Mediterranean, and Canada will in the case of officers of the Army Medical Staff be reduced from six to five years. Special leave for professional studies will be granted, and a paid substitute will also be provided for medical officers proceeding on private leave in all cases when their effective strength is below the authorised establishment. An officer of the A.M. Staff detailed to act as president or member of a mixed board, court of inquiry, or committee will take his place thereon according to his seniority as compared with that of the other members, thus clearly defining his *status* in matters unconnected with general command. The pecuniary allowance now issued to officers of militia regiments during their periods of annual training will in future be granted to medical officers when attached to these units."

NEXT MONTH.

LONDON is at present given up to the carpenters; wooden scaffolding and other signs of preparation for the coming event are already a feature that strikes the eye. We need not dwell upon the amount of good that arises from the affectionate loyalty of a people to the Queen and Royal Family. It would not be easy to form a correct estimate of it, but it is nevertheless impossible to avoid seeing that side of it which lends itself to the manifestations of benevolence and charity. The extremes of society are the rich and the poor, and they are strikingly present in a vast city like London, and it is not so much the duty as the privilege of one to help the other. It is fitting that something should be done to sweeten the memory and impart a pleasant aroma of gladness to the minds of the poorest of Her Majesty's subjects in connexion with the coming commemoration, and, thanks to the Princess of Wales's Fund, the outcast and the needy will not be forgotten on that occasion. During the sixty years that the Queen has reigned the events and changes that have taken place would fill a volume, and they have mainly been for the good and happiness of the people of this country. The greater diffusion of wealth that has taken place in those years has led to the material prosperity and comfort of the working classes and

the poor. The Queen has been young and now is old. Her life has, like those of her subjects, been one of joy and sorrow—in addition to the responsibilities appertaining to her position. The Queen has known the great bitterness of losses among those she loved, and the real loneliness of the position and sorrow of a Sovereign under such circumstances. But in the sixty years of her reign Her Majesty has shown by many acts that in joy, sorrow, or sickness she has counted upon the loyal sympathy of the people who are looking forward to next month to do her homage. It is a proud position to fill. The people of this country, whatever faults they may possess, are among the bravest, most generous, and most law-abiding people in the world, and the Queen must many times during the sixty years of her reign have been comforted by the assurance that their hopes, fears, and interests were identified with those of their ruler. It is the womanly qualities—the pity and compassion and the sympathy with all who suffer—that appeal to our people when they think of their Queen.

ICE ON BOARD OUR SHIPS OF WAR.

WE are surprised to learn from a letter in the *Times* of the 24th inst. that the vessels of our fleet are not provided with ice-making machinery. For the sick in tropical waters ice, we should have thought, was an absolute necessity. Yet it appears that it is not usual to find ice-making apparatus provided on our war-ships. If this be true, it can only be regarded as a standing reproach to the Admiralty. With all the available steam power and machinery on board these vessels, of the equipment of which we are well proud, there surely is left space enough, be it ever so small, for an ice-making apparatus. The space required would by no means be large, and the cost would certainly be very trifling, especially when compared with other machinery on board. We hope the matter will be brought to the notice of the Admiralty and that they will see their way to remove a very serious omission in the equipment of our men-of-war. It appears, however, from a letter from a firm of manufacturers in Wednesday's *Times*, that certain ships in the navy have recently been fitted up with ice-making apparatus, and that orders have been received to equip other ships of the fleet in a similar way. This is as it should be, but at the same time it indicates that not very long ago no such provision was made, so that the statements of the correspondent who first drew attention to the subject were probably right.

THE SELECTED CANDIDATES FOR THE FELLOWSHIP OF THE ROYAL SOCIETY.

OF the fifteen candidates selected by the Council of the Royal Society for election this year three are distinguished medical men—namely, Sir William Henry Broadbent, Dr. Haldane, and Dr. H. Alleyne Nicholson of the University of Aberdeen and formerly of Toronto. The work which fully qualifies these candidates in their separate fields of inquiry is well known. There is no need to dwell on the services which Sir William Broadbent has rendered to medicine—they are well known to our readers—while only recently Dr. Haldane, as will be very generally remembered, has added considerably to his credentials by his recent and most able report to the Home Secretary on the Causes of Death in Colliery Explosions. In addition to medicine, Dr. Nicholson represents also natural history and palæontology, of which subjects he is a distinguished student. Chemistry is somewhat fully represented by three candidates; of these, perhaps, the name of Dr. Kipping is most widely known amongst chemists as a distinguished worker in the field of original inquiry. He has contributed a very valuable series of papers bearing chiefly upon the synthetical formation of organic compounds. Mr. John Millar Thomson is the popular secretary of the Chemical Society and professor of chemistry at King's College. He has written some interesting papers on the phenomena of solution and crystallisation. Mr. Francis Henry Neville has been engaged chiefly in the teaching of natural science at Sidney Sussex, Cambridge. He was fifteenth wrangler in 1871. His work has been directed chiefly to the composition and behaviour of alloys. Geology is represented ably by Dr. Robert Bell, the assistant director of the Geological Survey of Canada. Dr. Bell has published an enormous amount of work based chiefly upon the geological and topographical exploration of a large tract north of Lake Huron. Dr. Charles Chree is the superintendent of Kew Conservatory; he is the author of several mathematical papers, contributed to various scientific societies, on heat, magnetism, and stress. Ornithology is represented by Mr. Henry John Elwes, who was president of the Entomological Society two years ago, and at an earlier date vice-president of the Horticultural Society. It is pleasing to see that our colonies will be represented at the Royal Society in the branch of zoology and comparative anatomy by Dr. William A. Haswell of the University of Sydney. Zoology is again represented in the person of Mr. George Bond Howes, assistant professor in the Royal College of Science. His connexion with literary work will be remembered in the "Atlas of Elementary Biology," and the enlarged edition of "Huxley and Martin's Practical Biology." He has also done some valuable original work. Mathematics is represented by Mr. George Ballard Mathews, professor of mathematics in the University College of North Wales; Botany by Mr. George Robert Milne Murray, of the British Museum; astronomy by Mr. Herbert Hall Turner, the Savilian professor of astronomy, Oxford, while natural philosophy has found an able representative from the University of Dublin in the person of Dr. Frederick Thomas Trouton, who has contributed a number of papers on various physical subjects to the *Philosophical Magazine* and to *Nature*, and many of them are published in the transactions of various learned societies.

THE ABUSE OF DISPENSARIES IN NEW YORK CITY.

FOR some time past there has been much dissatisfaction existing amongst the medical men of New York city with regard to the abuses said to be prevalent in the management of its charitable dispensaries. The subject has been thoroughly looked into and discussed, and it appears after this threshing-out process to have been proved most conclusively that charity has been imposed upon in a wholesale manner. At meetings of the Medical Society of the county of New York several medical officers of dispensaries gave evidence testifying to the shameless way in which persons who were well able to afford a substantial fee obtained advice under the plea of poverty. Instances were given of persons driving to a dispensary in a carriage to seek relief. In one case when the medical man advised the patient to be much in the fresh air and suggested trips on the ferry-boats as a cheap mode of attaining that object, he was somewhat taken aback by the invalid asking whether a voyage to Europe would not answer the purpose equally well. It was, in fact, clearly shown that these charities were extensively used by a class for whose benefit they were most certainly not intended. The New York Medical Society for advancing the Practice of Medicine, representing the sentiments and wishes of the majority of the medical practitioners in New York City, has introduced a Bill into the State Legislature to regulate dispensary relief in that city and to protect the interests of the private practitioner. By Section 5 of this Bill "all persons wishing to be treated at a dispensary shall be compelled to produce to the persons

carrying on said dispensary a certificate from the owners of the premises wherein such persons reside, or from the police captain or person in charge of the police in the district in which he or she resides, or from the alderman of the district, or from any charity organisation, that the said applicant is a poor person and unable to pay for medical treatment." Section 6 states "that any person applying to a dispensary to be treated and not fulfilling these provisions, or any person aiding anyone so applying to be treated or signing such certificate knowing that such a person so applying is not a poor person, shall be guilty of a misdemeanour." "The Bill if passed will also do away with any kind of payment, as one of its provisions stipulates that all persons who can show themselves to be entitled to treatment shall receive that treatment free in addition to being supplied with medicine and appliances, and further provides that no one conducting a dispensary shall receive any pay whatever." The last section of this Act reads that "the husband and wife shall be jointly and severally liable to pay for professional services of a physician rendered to them, or either of them, or any member of their family, and the joint or several property of the husband and wife shall be liable to levy and sale under an execution upon such judgment, except such property as may by law be exempt from levy and sale under an execution." This clause is of great importance to the medical profession in New York, for as the law stands now a man can evade the payment of his just debts by having his property made over to his wife. The principal medical societies of New York city are given the power each to appoint one person to form a board for the purpose of supervising the conduct of dispensaries, and it is proposed that any person or persons violating this law shall be liable to a large fine or six months' imprisonment. The *New York Medical Journal* criticises the Bill as crude and exacting in its requirements and faulty in its form.

SECONDARY RASHES IN SCARLET FEVER.

SECONDARY rashes during the convalescent stage of scarlet fever, though not very uncommon, are unnoticed by most writers. They must not be confounded with true relapse. Some time ago we published an article by Mr. Manning entitled, "The Skin Eruptions which occur in Septicæmia following Scarlet Fever and Diphtheria."[1] In 2·1 per cent. of nearly 6000 cases of scarlet fever and diphtheria under his care in the City Hospital, Birmingham, he found a condition to supervene characterised by wasting, pyrexia, a peculiar erythematous eruption, and high mortality. It usually supervened in the second week of the attack of scarlet fever, and was almost invariably attended with sloughing in the throat. He therefore attributes it to septic poisoning from this source. Dr. J. O. Symes [2] has recently described a secondary rash, observed in a series of cases of scarlet fever in the London Fever Hospital, apparently of a different nature. The eruption appeared about the third week, almost invariably in patients in whom the throat symptoms had been severe, and frequently coincided with a recrudescence of tonsillitis. Its character varied in different cases, being either erythematous, urticarial, eczematous, papular, or hæmorrhagic. It does not appear to have been caused by septic absorption from the throat, because tonsillitis was absent in some cases, in others it preceded the eruption, and in none was there ulceration or sloughing. Complications such as diarrhœa, vomiting, and nephritis sometimes occurred, which leads the writer to suggest that all the symptoms may be due to a critical elimination of the disease products in the third week. Mahomed observed certain changes between the eighteenth and twenty-second day—a rise of arterial tension, a diminished excretion of urine, pyrexia, albuminuria, otorrhœa, adenitis, and diarrhœa; but he does not mention secondary rashes. As an indication of these complications the detection of the rash is important. The writer states that similar eruptions are frequently seen in scarlatinal "rheumatism," but that it was only present in two out of the nine cases. This suggests to us the conclusion that the eruption and other symptoms are of the same nature as the "rheumatism" and due to a common cause which produces varying effects.

[1] THE LANCET, Aug. 13th, 1892.
[2] Bristol Med. Jour., March, 1897.

MILK AND TUBERCULOSIS.

ALMOST day by day fresh evidence accrues of the extreme necessity of placing cows under the best possible sanitary environment, since darkness, filth, and defective ventilation are favourable conditions for the development of tuberculosis, and the milk of tuberculous cows, especially when the disease affects the udder, is an undoubted source of infection. In a recently published report on tuberculosis as affecting the milk supply of the city of Liverpool the medical officer of health, Dr. Hope, states that the investigation of the bacteriologists showed that 2·8 per cent. of the samples of milk taken from the city shippons contained the tubercle bacillus. As he points out, and as we emphasised only last week, this doubles the need for strictly applying the by-laws. Dr. Hope very properly observes that, important as this result is, it sinks into insignificance compared with the large proportion of milk infected with tubercle which is sent in from the country, this proportion amounting to no less than 29·1 per cent. In the same way what guarantee, we may ask, have we that milk imported in a frozen state from foreign countries is free from infection?

THE MANCHESTER SEWAGE PROBLEM.

WE have received from Mr. Bradley, a member of the Manchester City Council, a paper read before the Manchester Statistical Society, entitled "Manchester Sewage Problem, with Suggestions for its Solution and Suggested Amendments of the Rivers Pollution Prevention Act." The great difficulty is so to deal with the immense volume of 26,000,000 gallons of sewage per day, that the sewage effluent shall be pure enough to be discharged into "a nearly stagnant portion of the Ship Canal." The question of filtration through land is thus dismissed as impracticable:—"First, because we cannot obtain the necessary quantity of land, and, secondly, if we could the land would be of a kind that would be unworkable and probably a source of infection to the whole neighbourhood." He then considers the methods of chemical precipitation and subsequent treatment by artificial filters. "At Davyhulme the precipitation is effected by the addition of milk of lime, and subsequently by the addition of copperas (protosulphate of iron), about seven grains of each being added to every gallon of sewage." As a rule the effluent does not come up to the standard of the joint committee, which, by the way, comes in for some of Mr. Bradley's severest strictures. He says it "apparently exists only to harass and command." This standard, which Mr. Bradley considers unreasonable for Manchester, is that any effluent entering the canal shall not absorb in four hours more than one grain of oxygen in a gallon, and that it shall not contain more than 0·1 of a grain of albuminoid ammonia per gallon, or by weight one-tenth of a grain of albuminoid ammonia in 70,000 grains of effluent. Such an effluent can be produced at Manchester, but at such a cost, and requiring such constant supervision that Mr. Bradley considers it impracticable. Nor does he hope much from invoking bacterial energy. He advocates the discharge of the sewage by a culvert carried to Randall sluices below Warrington, in the estuary of the Mersey, where what he now calls the "effluent water" can be discharged directly into the receding tide. In

order to supply the canal with an equivalent for the 26,000,000 gallons of sewage effluent sent down the culvert he would provide a pumping station at Latchford to raise any required quantity of water from the tidal level to the higher level above the locks. If the pumping station or an "occasional discharge of the Manchester effluent water into the canal" were considered objectionable he would flush the docks at Pomona with 10,000,000 gallons of Thirlmere water. Mr. Bradley is really advocating the plan proposed by the Rivers Committee and emanating from the City Surveyor. It is a confession of failure over which Mr. Bradley becomes rather eloquent. "When they had the culvert they would be done with the difficulty, they would not be constantly harassed by law, they would be perfectly free, and it would be as grand a thing for Manchester" (to pour their filthy effluent into the estuary of the Mersey) "as was the bringing of pure water from Thirlmere." He evidently looks with regret on the loss of the ancient privilege of pollution, and speaking of the river, says: "It is the same stream that has for centuries conveyed the drainage of Manchester to the sea, and it is especially unreasonable on the part of the majority of the Mersey and Irwell Committee to oppose in Parliament and prevent one of the most important trading centres in the world from exercising her ancient privileges." He would do away with the present Mersey and Irwell Committee, and proposes "a new form of board constituted more in accordance with the requirements of Manchester."

CEREBELLAR FUNCTIONS.

IN a recent number of the Proceedings of the Royal Society a preliminary account appears of some interesting experiments by Dr. Max Löwenthal and Mr. Victor Horsley on the relations between the cerebellar and other centres, especially with reference to the action of antagonistic muscles. These experiments were undertaken because of an observation that when both cerebral hemispheres were removed, and as a result active extension tonus of the limbs was obtained; faradaic excitation of the upper surface of the cerebellum caused immediate relaxation of such tonus so long as the current was applied, but as soon as the latter was shut off the tonus was immediately re-established. Such an observation, indicating, as it did, a distinct connexion between the cerebellum and the lower centres, made careful examination necessary, and it was found that such an effect was constant provided the tonus was well established, and the effect was not merely an actual relaxation of the triceps, but also a marked contraction of the biceps. Experiments were arranged in which the effect could be graphically recorded, and in the dog and cat it was found that excitation of the left motor cortex and of the left corona radiata produced invariably symmetrical and synchronous contraction of the prepared muscles, biceps and triceps of the right side. Excitation of the crusta on the cut surface before the general tonus was established produced invariably contraction of both biceps and triceps; excitation after it was established, of the left crusta produced in thirteen cases contraction of the biceps and contraction of the triceps, in two contraction of the biceps and relaxation of the triceps, and in one relaxation of the biceps and contraction of the triceps. Excitation of the cerebellum produced very constant effects. After the tonus established by removal of the cerebellar hemispheres was present excitation of the cerebellum caused a striking and active relaxation of the triceps and an active contraction of the biceps on the same side as that stimulated. In twenty-nine experiments it was found that the muscles of the right arm could be influenced by excitation of both halves of the cerebellum, but the effect was greater on the same side as that stimulated. In five experiments excitation of the left half of the cerebellum evoked relaxation of the biceps on the opposite side. When the tonus produced by removing the cerebral hemispheres was not yet established excitation of the surface of the cerebellum constantly produced atonic contraction of either the triceps or biceps, or of both together. Synchronous excitation of the cerebral area for the forelimb and of the cerebellar focus produced, in cases in which the cerebellum is definitely excitable, an addition to the tonus previously elicited from the cortex cerebri. The inquiry is very interesting, and seems likely to throw light upon some of the functions of the cerebellum hitherto so obscure.

OXFORD GRADUATES' MEDICAL CLUB.

THE summer dinner of this club was held at Limmer's Hotel on May 20th, Dr. Whipham being in the chair. About a hundred members and guests were present, among the latter being Dr. Wilks and Mr. Clinton Dent. The toasts, which, according to the unwritten law of the club, were as few as possible in number and proposed in the fewest possible words, were given by Dr. Whipham, and consisted of "The Queen" and "The Club and its Guests." In proposing the latter Dr. Whipham referred to the losses the club had sustained by the deaths of Mr. George Child, of Oxford, and Dr. James Andrew.

THE DANGERS OF CELLULOID.

WE drew attention last week to the extreme inflammability of the substance called celluloid, and we pointed out that though the celluloid films of the kinematograph employed on the occasion of a demonstration at the Bazar in Paris, where such an awful disaster happened, might not have been the primary cause of the fire yet doubtless the presence of long sheets of this highly inflammable material accentuated the rapidity and fierceness of the conflagration. Could nothing be done, we urged, to make celluloid less inflammable without impairing its transparency. We believe that by interposing a bath of alum solution between the source of light and the pictures a great proportion of the heat rays would be filtered out so that little heat would be concentrated upon the inflammable screen. The danger is no imaginary one, and all such public demonstrations should, we consider, be subjected to rigid inspection and control. Another fire at Paris was reported in the papers on Tuesday last arising from the probably careless handling of a kinematograph. It so happened that there were only thirty spectators present, which considerably lessened the chance of a serious panic. The kinematograph as a source of amusement and, we may add, of instruction is being very largely employed in crowded places of public resort, and it is imperative, we think, that some action should be taken to provide as far as possible for the safest possible conditions of carrying out this kind of entertainment.

THE BECKENHAM AND PENGE MEDICAL SOCIETY: THE BATTLE OF THE CLUBS.

A VERY useful and sensible discussion followed the annual dinner of the United Beckenham and Penge Medical Society, at which Mr. Frank Sturges presided. The health of the society was proposed by the Rev. Charles Green, vicar of St. Paul's, Beckenham, in a speech which showed great appreciation of the profession and the value of local medical societies in promoting good fellowship and professional harmony. He alluded to what seems to have been a somewhat warm newspaper discussion on medical clubs and the objections of the profession to unfit persons as members. He rightly observed that mere temper would not solve such questions, unless, indeed, it is that

good temper which comes of a good cause and a generous disposition to be reasonably accommodating to those who need our services. Mr. Sturges, in his reply, stoutly maintained the duty of the medical profession to defend itself against a small minority who are ready to accept any terms in medical aid associations, even in those which work by paid canvassers canvassing the patients of private practitioners. A gentleman had lately been imported from such an association to the neighbourhood full of sympathy with clubs in their wrongs at the hands of a cruel-hearted profession, and willing to accept all their appointments on their own terms. This was most unsatisfactory just when the principal clubs of the district had come to terms with a very united profession. Mr. Sturges sees the difficulty of legislation in this matter and suggests that Universities and qualifying bodies should insert a clause in their degrees or diplomas under which no one could accept an appointment which in the opinion of the profession is derogatory without risk of losing his degree or diploma. Already most of the qualifying bodies —not universities—have power to censure or punish behaviour or methods of practice inconsistent with the dignity of the profession. They need to be stimulated to action by such societies as that of Beckenham and Penge. Meantime the public opinion of the district must find expression—dignified and calm, as Mr. Green suggested, but clear and decided, as Mr. Sturges, representing thirty-five medical men, exemplified.

PULMONARY TUBERCULOSIS AND ATMOSPHERIC IMPURITY.

THERE has just been issued by Dr. A. K. Chalmers, the medical officer of health of Glasgow, a report upon the distribution of turberculous diseases in that city. Glasgow, with its wide area, its numerous sanitary districts, and excellent sanitary organisation, is just the place for an inquiry of this kind, since the various districts exhibit marked contrasts in respect to density of population, social status of their inhabitants, and in the class of dwellings. Dr. Chalmers deals with all forms of tuberculous disease, grouping its varieties in the categories of pulmonary phthisis, tabes mesenterica, tuberculous meningitis, and "other forms," including "scrofula." He shows that the mortality from all these affections has very markedly diminished of late years, the average annual death-rate per million living having been for phthisis 2349 in 1883-88, and 2318 in 1889-94, a reduction of 18·6 per cent. Similarly there has been a fall in the death-rates from all the other forms of tuberculous disease, amounting in the aggregate to 18·7 per cent., the reduction being most marked in the class of tabes mesenterica and least in that of meningitis. The main part of his report, however, deals with the incidence of fatal cases of pulmonary tuberculosis in the various districts, in comparison with the liability of the communities to the inhalation of atmospheric air rendered impure by respiratory exhalations. He arrives at this approximately by determining, not only the population density of each district, but also what he terms the "room density"—that is, the average number of persons per room in the houses of the district. This calculation cannot, of course, take account of the actual cubic space of the dwellings, or of the greater or less facilities for ventilation; but neglecting these and other modifying circumstances it yet comes out very clearly that the amount of phthisis does vary proportionately to the room-density. This is well shown by his conclusions, which we cannot do better than quote. They are:—

1. The room-density of the whole city fell from 2·040 in 1881 to 2·033 in 1891, or a decrease of 7 persons per 1000 rooms, and its phthisis-rate from 268 to 230 per 100,000 living.

2. All districts, save one, having a phthisis death-rate above the mean have a room-density also above the mean. St. Enoch-square district is the only exception to this.

3. In all these districts, save St. Andrew's-square, the room-density was greater in 1881 than in 1891.

4. Eleven districts have a phthisis death-rate below the mean; five of them have a room-density in excess of the mean, which is tending toward increase in three of them.

5. These exceptions are sufficiently large to show that the relationship between room-density and phthisis is not a simple one, and that excessive density is not at once responded to by an increased phthisis-rate; but in nine districts where the room-density increased between 1881 and 1891 the phthisis death-rate fell 13·5 per cent., whereas in fourteen districts where the room-density was reduced the phthisis-rate fell 16 per cent.

Thus, as Dr. Chalmers says, the death-rate from phthisis is decreasing more rapidly in those districts which have a concurrent decrease in room-density. His report is amply furnished with statistical information that bears out the conclusions at which he has arrived. The practical lesson is of the greatest importance. It is that which we fear is never considered in the building of great towns, where the tendency is to encroach upon air-space, and if not to cause an increase in the actual density of the population, to at any rate diminish the opportunities for that thorough permeation of pure air in and around dwellings which is the main element in all the prophylaxis of pulmonary tuberculosis.

THE ALDERSGATE-STREET EXPLOSION.

THE evidence adduced at the inquest held upon the body of Henry Pitts, who lost his life in the mysterious explosion on the underground railway on April 26th, confirms unfortunately the views which we expressed in our issue of May 1st in regard to the origin of this occurrence. We feared then that everything tended to show that a dastardly and cowardly miscreant was at large amongst us, and that he had employed a powerful explosive, adjusted to explode at a certain time, for his hellish and insane purpose. The same conclusion has been arrived at by Sir Vivian Majendie, Her Majesty's Inspector of Explosives. At the inquest he said that "he had no doubt in his mind that the explosion was due to a high explosive, which had exploded on the floor of the carriage, and which high explosive was not contained in a metal case, but was fitted with a fuse and put into the train." Further evidence given by railway officials appeared to distinctly confirm this view. Sir Vivian Majendie remarked that this was the fourth explosion on the underground railway, and all that remained was to find the perpetrator of the outrage. The only consolation to be derived from the issue of the occurrence is that not more lives than one were lost, and considerable praise is due to that engine-driver who, as soon as he was aware of what had happened, turned on his whistle, and so warned other trains not to enter the station. In the confusion that prevailed the results of a train entering upon the scene of the explosion at that moment might have been disastrous indeed.

ENLARGEMENT OF FUNCTIONS OF THE METROPOLITAN ASYLUMS BOARD.

No student of disease, or even of sociology, can fail to watch the work of the Metropolitan Asylums Board. There is not much new to report in respect of its ordinary work in the fortnight ending on May 20th. The cases notified to the Board and the cases admitted were both a little more numerous than in the preceding fortnight. Of the 1429 cases notified to the Board, as against 1341 in the preceding fortnight, 749 were received into the hospitals of the Board. The meeting had unusual interest on two grounds. First, the presentation of the annual report by the chairman; and,

secondly, the adoption of a report of a special committee on steps necessary for accommodating certain classes of diseased pauper children. The most important part of the chairman's statement was that for six months of the year the managers had to refuse admissions, which would have filled 500 more beds than they had. At one time, with a normal accommodation for 3900, they had 4996 cases, or an excess of nearly 1100 cases. The expenditure meantime proceeds by leaps and bounds, the liabilities on loans on Sept. 30th last being £1,741,991, as against £1,563,844 at Michaelmas, 1895. No attention seems to be given either by the Board or by the Local Government Board to the question how far this ever-enlarging expenditure might be met by excluding unfit cases or cases which might be treated at home. It is noticeable that of the 3400 servants in the employment of the managers when the Poor-law Officers Superannuation Act passed (1896) 2444, or more than two-thirds, declined to take advantage of its provisions. The Board, undaunted by its present responsibilities, adopted a report formulating plans for the accommodation of 800 cases of contagious ophthalmia, 400 cases of ringworm of the scalp, besides accommodation for weak-minded and physically infirm children who cannot well be trained in ordinary schools, and for remand cases under the Industrial Schools Act. It will be interesting to see how far an essentially medical treatment of such classes of unfortunate children will tend to eradicate the physical taints of pauperism and to place them on a fairer level of health for the race of life. We have great faith in the far-reaching effects of a sound medical treatment, not restricted by the considerations that too often weigh with guardians.

PUBLIC VACCINATORS AND THE SUPERANNUATION ACT.

WE have on previous occasions[1] drawn attention to the absence of any provisions being made in the Poor-law Superannuation Act for public vaccinators, an omission which was due to the fact that they did not look after their own interests when the Act was being framed in the same manner as the clerks to guardians did, who stand, as regards their offices of registrars of births and deaths, exactly in the same position as district medical officers do as regards their posts of public vaccinators. The Poor-law Medical Officers Association has very properly been considering the matter, and submitted a series of questions to Sir Robert Reid as to the construction of the new Act—namely, if public vaccinators can be regarded as coming within the scope of the Act, whether they hold no other post under the Poor-law or that of district medical officer in addition. His opinion on all these questions is virtually that a public vaccinator, whether he holds the post of district medical officer or not, is not, in his capacity of public vaccinator, *an officer* employed by the guardians, and therefore cannot count the vaccination fees as part of the emoluments on which a pension can be based. To the uninitiated and to the unlegal mind these quibbles seem very curious, but Sir Robert Reid's opinion only confirms that of the Local Government Board, and, therefore, the only thing that remains is to test the matter in one of the courts. But in all probability the money so expended would be better devoted to getting an alteration of the law. The nurses have also been rather hardly dealt with in the Superannuation Act, and from much the same reasons. Why should not the public vaccinators coöperate with the nurses? The latter have been promised some valuable help to obtain a short amending Act this session, which will enable them to have the option of excluding themselves from the provisions of the Act if they choose. It would be only fair if a clause could also be inserted in the proposed amending Act setting forth in the wording of Section 19 of the Act of 1896 a provision that "for purposes of this Act" public vaccinators "are deemed to be in the service of the guardians of the union or parish" with whom they have a contract for the performance of vaccinations. Many things in this world may be done by coöperation which cannot be done single-handed, and we commend the idea to the notice of the public vaccinators, who certainly have grounds for feeling aggrieved at their exclusion. The Workhouse Infirmary Nursing Association (6, Adam-street, Strand), always mindful of the interests of Poor-law nurses, could doubtless give information as to how matters now stand as regards the proposed amending Act; or perhaps Mr. Rutherglen, the clerk to the guardians of Kensington, who took an active part in promoting the existing statute, would aid the public vaccinators in getting their disabilities removed.

[1] THE LANCET, Nov. 7th and 28th, 1896.

THE JENNER MEMORIAL MEDAL OF THE EPIDEMIOLOGICAL SOCIETY.

THE support which the profession has given to the Jenner Memorial Medal Fund has, we are glad to hear, enabled the Epidemiological Society to found a medal, and at the annual meeting of the society which was recently held it was announced that the design and execution of the medal had been entrusted to Mr. Allan Wyon, F.S.A. On the obverse of the medal is to be the head of Edward Jenner, while on the reverse is a representation of the globe similar to that shown on the diploma of the society. It was announced at the same meeting that Lord Lister had accepted the office of Honorary Vice-President, also that the society had determined to published in pamphlet form the extremely able paper in which Dr. McVail dealt with the Dissentients' Statement in the report of the Royal Commission on Vaccination.

VESTRIES AND QUACK ADVERTISEMENTS.

A CORRESPONDENT writes: "I should like to call your attention to the following circumstance: I think that your opinion about it will coincide with mine, and you may be able to get the abuse removed, or suggest a means for doing so. In the handsome and commodious new public urinal in Hyde Park, close to the Marble Arch, there is a clock in a conspicuous position disfigured by an advertisement in large letters round its face of Beecham's Pills, &c., and round the pendulum below is added 'Sale 7 (or some such number) every second.' The Vestry of St. George, Hanover-square, is, of course, responsible for this monstrosity. I drew the attention of a member of the Vestry to the matter some time ago, and he promised to bring the matter before the Vestry; but I observe that nothing whatever has been done." Now a urinal may be a very good place in which to advertis quack medicines, and it is, in fact, a place often used by the bill-posters of persons who may be termed irregular practitioners; but the bill-poster and the vestry of St. George, Hanover-square, stand in somewhat different relations towards the public. Indeed, we believe that some vestries propose to prosecute the bill-stickers for a proceeding similar to that of which the vestry of St. George, Hanover-square, has been guilty. For a vestry itself to advertise in this extremely conspicuous manner a quack remedy is, to put it mildly, an indiscretion. To us, moreover, viewed from a commercial aspect, it would seem to be an extremely bad stroke of business unless the vestry obtained from the proprietors a great deal more than a clock. Suppose we estimate the value of the clock, for argument's sake, at £50, the annual value of £50 is not more than £2, and in the case of a clock would decrease with the

wear and tear of time. The annual value to the proprietors of these pills of a permanent advertisement in a public place with sitting and standing accommodation during the long hours that it is open for many hundred persons would, at the ordinary scale of English advertisements, be many hundred times £50.

THE BLACKWALL TUNNEL.

THE new tunnel under the Thames, which was opened on May 22nd, must prove of immense value to the inhabitants of the East-end of London, who hitherto have had no free river crossing between London-bridge and Woolwich. Great praise is due to the London County Council for having successfully carried the work through, and as Lord Rosebery humorously remarked at the dinner given in celebration of the opening of the tunnel, "if a political Cromwell from one or other of the Governments which succeed each other in Downing-street should step forward and say: 'Remove that bauble' (the London County Council) and sweep them out of existence, they would always live, if only by the memory of the Blackwall Tunnel." From an engineering point of view the work must rank among the more remarkable triumphs of the Victorian era, and from a medical point of view it must also be regarded as a remarkable performance. In all great building works there are generally a number of serious accidents, and in the present instance the probability of an increase in the proportion of casualties was enhanced as the men had to work in compressed air, which is now generally used in excavations beneath water. Notwithstanding the fact that the tunnel has taken five years to complete, Dr. Collins was able to inform His Royal Highness that the operations had been carried out with unusual freedom from serious accidents—a fact which speaks volumes for the great care which had been taken to protect the operatives.

THE IODINE TEST FOR SEMEN.

THE difficulty of identifying spermatozoa by the microscope in the case of old stains is admitted. Florence of Lyons has introduced a chemical test which appears to be valuable,[1] judging by recent reports. The reagent is one used in testing alkaloids, known as the tri-iodide of potassium (KI_3). The formula is: iodide of potassium, 1·65 grammes; iodine, 2·54 grammes; and distilled water, 30 c.c. When a drop of the liquid obtained by moistening a seminal stain is placed side by side with a drop of this solution on a slide large numbers of peculiar brownish red, pointed crystals appear. They are rhomboidal and closely resemble hæmin crystals. Dr. Wyatt Johnson states[2] that he readily obtained the reaction with stains a year old. He also confirms Florence's statement that other secretions of the body, such as blood, urine, sweat, saliva, tears, bile, milk, pus, nasal or vaginal mucus, will not give the reaction. With the semen of animals in some cases he obtained a doubtful reaction. Dr. W. F. Whitney[3] also obtained the reaction readily. But as alkaloids give a precipitate with the reagent, its value, like the guaiacum test for blood, is chiefly negative. The last writer has found the following method of examining a seminal stain even as old as two and a half years successful. A drop of fluid obtained from the moistened stain is evaporated and fixed by a flame. The film is stained with eosin and methyl green and mounted. At the base of the head of the spermatozoa is a hemispherical portion which stains a deep green, whilst the anterior part and tail stain red. This serves at once to identify them, as there is no other oval spore or cell which has an eccentric hemispherical nucleus. He furthermore claims that the test proves them to be human, as in no other animal is there a deep staining. When this test is combined with Florence's there ought to be no difficulty in coming to a conclusion.

[1] Archives d'Anthropologie Criminelle, January, February, and March, 1896.
[2] Boston Medical and Surgical Journal, April 8th, 1897.
[3] Ibid.

THE SOCIETY FOR THE RELIEF OF WIDOWS AND ORPHANS OF MEDICAL MEN.

THE annual general meeting of this society was held on Wednesday, May 19th, at 5 P.M., Sir James Paget, President, being in the chair. From the report read by the secretary it appeared that thirteen new members had been elected in 1896, thirteen had died, and four had resigned, leaving 292 on the books. Four widows and four orphans had been added to those already in receipt of grants, four widows had died or become ineligible, and one orphan had ceased through age to be eligible for further assistance, and fifty-three widows and eleven orphans had received £2893 10*s.* during the year. The total receipts available for the payment of grants and expenses had been £3291 11*s.* 5*d.*, and the grants and expenses had amounted to £3136 13*s.* 9*d.*, leaving a balance of £154 17*s.* 8*d.* The funded property of the society, now £97,300, had been increased by the investment of the residue of Miss Emma Carpue's legacy of £1600. A vote of thanks to the editors of the medical journals for their kind assistance in making known the work and objects of the society was proposed by Dr. Wilks, seconded by Mr. Milburn, and carried unanimously. A special grant of £26 was made to a widow. Dr. Wilks, Dr. Pollock, and Mr. Felce were elected vice-presidents, Dr. Brodie, Dr. Ogle, Dr. Blandford, Dr. Slight, Dr. de Havilland Hall, Dr. James Miller, Mr. Lovett, and Mr. Day were elected directors to fill the vacancies in the list of officers for 1897–98 caused by death and the retirement of the six senior directors. The acting treasurer, Dr. Potter, proposed a vote of thanks to the President, Sir James Paget, for presiding at the meeting. The vote was passed with great cordiality.

THE first annual meeting of the National Association for Promoting the Welfare of the Feeble-minded (secretary, Miss Paul; temporary office, 27, Percy-street, W.) will be held at 36, Lancaster-gate, W., on June 2nd, at 4 P.M. Dr. Savage, Dr. Frederick Needham, and Mr. G. T. Pilcher, of the Charity Organisation Society, are announced to speak.

WE have received the report of the medical superintendents upon the use of antitoxin serum in the treatment of diphtheria in the hospitals of the Metropolitan Asylums Board during the year 1896. The report is an exhaustive statistical study of its subject, an analysis of which we shall place before our readers next week.

H.R.H. PRINCESS HENRY OF BATTENBERG has fixed Saturday, July 31st, as the date for the ceremony of laying the foundation stone of the eleventh block of houses of the Royal National Hospital for Consumption, Ventnor, to increase the accommodation to 155 beds.

H.R.H. PRINCESS LOUISE, Marchioness of Lorne, has graciously promised to open, some time in July, the Convalescent Home at Cranbrook, Kent, given by Mr. Passmore Edwards to the Metropolitan Hospital.

FIELD-MARSHAL SIR JOHN LINTORN SIMMONS, G.C.B., G.C.M.G., will distribute the prizes to the students of Charing-cross Hospital on Wednesday, June 2nd, 1897, at 4 o'clock precisely.

GUY'S HOSPITAL has received £1000 from Mr. Charles Gassiot towards the cost of building a nursing home in connexion with the hospital.

Pharmacology and Therapeutics.

RADIANT HEAT IN ULCERS OF THE LEG.

DR. COLLEVILLE, professor of Internal Pathology in the Rheims School of Medicine, treats ulcers of the leg by exposure to heat in a simple way without any very elaborate apparatus. All that is required is a square plate of metal which will stand heating and a Bunsen burner. The blue flame of the latter impinges on the metal so as to bring it to a dull red heat, and the ulcer is exposed to the action of this at a distance of about ten inches, the rest of the limb being protected by bandages. The temperature is about 45° C. which is easily borne, and the flame is regulated so as to maintain this temperature at the wound during the whole of the sitting which lasts for from twenty minutes to an hour. At the conclusion the surface is found to be glazed over, large granulations being visible through the semi-transparent coating. It is best to leave the ulcer exposed to the air for some time, and when it is dressed care should be taken that its surface is not touched by the aseptic gauze or other material used. Some improvement is generally experienced by the patient even after the first sitting, and cicatrisation is completed in from five to twenty-five applications. In the later sittings, when the ulcer is nearly healed, a more moderate degree of heat may be employed. Where gas is not available the heat of the sun or that of a fire may be utilised. Dr. Colleville attributes the beneficial effect of this method to the combined action of heat, light, and ventilation.

PARALYSIS FROM THE MEDICINAL ADMINISTRATION OF ARSENIC.

In a recent number of the *Glasgow Medical Journal* Dr. Middleton has published an interesting case of a boy, aged eleven years, who, on account of a skin affection, had Fowler's solution of arsenic administered to him in increasing doses. The administration was commenced in January and the first symptoms of paralysis appeared in March. Examination in the following June revealed complete flaccid paralysis in all four extremities, with atrophy and loss of knee-jerks. There was considerable pain on pressure of the muscles and nerves, but no obvious impairment of sensibility.

OIL OF WINTERGREEN AS AN EXTERNAL APPLICATION IN RHEUMATISM.

According to M. Lemoine local applications of oil of wintergreen are valuable in rheumatic fever, acting more rapidly in relieving pain than salicylate of soda and being free from the liability to produce tinnitus or giddiness, which sometimes follow the use of the latter drug. He soaks a piece of lint in two or three drachms of the essential oil, and applies it to the skin; the whole is then completely covered by oiled silk, which well overlaps the lint, and carefully bandaged so as to prevent external evaporation. The application is made over the painful spot if this is conveniently situated. If otherwise the thigh or arm is chosen. In this case the oiled silk should be long enough to encircle the limb, and the absorption of the salicylate of methyl which forms some forty per cent. of the oil produces almost as good a result as if applied to the seat of the pain. This method of treatment answers very well also in some cases of sciatica and, according to M. Siredey, in chronic rheumatic affections, where it may be used for a considerable time without any ill effects, either local or general. Here it acts better when applied directly to the affected joints than when the dressing is placed round the shaft of the bone. The strong smell of the oil is the only inconvenience. The same application has proved useful in relieving the lightning pains in a case of locomotor ataxy. The use of oil of wintergreen as an external application in chronic and subacute rheumatism is of course not anything novel, though the particular method of its employment may perhaps be so. Mr. J. D. Staple, however, used it in the Stockport Infirmary several years ago as a liniment combined with an equal quantity of olive oil, and reported[1] that in only two out of a hundred cases of chronic rheumatism did it fail to relieve the pain.

[1] THE LANCET, Aug. 30th, 1890, p. 444.

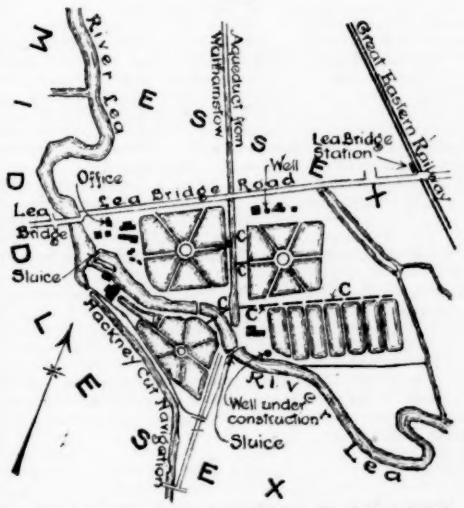
The Lancet Special Commission
ON THE
METROPOLITAN WATER-SUPPLY.

XIV.[1]

EAST LONDON WATERWORKS COMPANY (*Concluded*).

Lea Bridge (see L on Map, THE LANCET, May 8th, p. 1291, and Fig. 1).—The station at Lea Bridge is situated partly in the county of Middlesex and partly in Essex. It is bounded on the north by Lea Bridge-road, on the west by the Hackney Cut of the Lea Navigation, and on the south and east by the Hackney marshes. The station is divided into two parts by the River Lea, which is the county boundary. The Middlesex part of the station contains filter beds, a pumping engine, and turbines. The water which flows down the old course of the River Lea is regulated by sluices, one of which is situated at its juncture with the Hackney Navigation Cut, and the other at the point at which the river leaves the Company's property. The sluices are in charge of the Lee Conservancy Board. The part of the station which is situated in the county of Essex is divided into two by the aqueduct which brings the water from the Company's reservoirs at Walthamstow. The part of the station which is situated to the west of the aqueduct contains the offices of the Company, engine houses, and one set of filter beds. It is the custom of this Company to name their engines. Those which are situated here are the "Victoria," "Triples," "Prince," and "Princess." To the east of the aqueduct there are two sets of filter beds and an engine house for the "Duke" and "Duchess," the "Prince Consort" and horizontal engines. The well is also situated here. At the southern part of the station near the Lea a well is being sunk. The bulk of the water pumped from Lea Bridge comes from the Walthamstow reservoirs through the aqueduct (see Fig. 1), but a small quantity is

FIG. 1.



The Map shows the station at Lea Bridge. The letters C C C show the course of the culverts which pass from the aqueduct to the filter beds.

obtained from the deep well at this station. No water is taken from the River Lea at this point. The water from the aqueduct passes both to the Essex and Middlesex filter beds through culverts guarded by copper wire gratings of which the meshes are about $\frac{1}{10}$ in. in diameter. These gratings are

[1] Nos. I., II., III., IV., V., VI., VII., VIII., IX., X., XI., XII., and XIII. were published in THE LANCET of Feb. 20th and 27th, March 6th, 13th, 20th, and 27th, April 3rd, 17th, 24th, May 1st, 8th, 15th, and 22nd, 1897, respectively.

cleansed twice every day and sometimes more frequently. The water to the Middlesex beds passes in an aqueduct under the Lea, and that for the Essex beds in the course marked in the map (see Fig. 1, C. C. C.).

Middlesex part of the station: Filter Beds.—There are six beds, which occupy six acres. The sides of the filter beds are built of brick at a slope of 1½ to 1. Each has a central and two lateral culverts to receive the filtered water. Water passes into these channels through perforated bricks. The filtered water well is 100 ft. in diameter, and is situated at the point marked by a circle in the centre of the nest of beds. The composition of the beds is the same as that of those at the Essex part of the station, and will be given with the description of them.

Pumping arrangements: "Victoria."—This is a Cornish pumping engine having a cylinder 100 in. in diameter and stroke of 11 ft. which works a pump of which the diameter is 50 in. This engine is used for pumping water through a stand pipe 48 in. in diameter and 120 ft. in height for the supply of the middle level district which embraces Mile End, Stratford, West Ham, Hackney and Bethnal Green. The head of water worked against is about 100 ft. The pump raises 150 cubic feet per stroke and works at a rate of 10 strokes per minute. The engine is therefore capable of pumping over 13,000,000 gallons daily. The steam is generated by eight Cornish boilers worked at the pressure of 35-40 lb. Some of the water used by the boiler is softened by the Porter-Clarke process.

Turbine house.—Near the "Victoria" engine house there is a house which contains two turbines which make use of the water power of the River Lea in flood time. The turbines are of the Girard type and work three plunger pumps 10 in. in diameter, which have a stroke of 2 ft. The pumping capacity is 20·4 gallons per revolution. In the same house a small turbine is worked by pressure from the water mains for the generation of electricity for lighting the station; the water thus used is returned again to the filter bed.

Water which was filtered at this station was formerly conducted by a culvert to the Company's station at Old Ford which has since been given up. The part of the aqueduct which is situated at the Lea Bridge station still remains and is used for another purpose. Into it the water from some of the filter beds is allowed to flow when they are emptied for cleansing purposes. In time of drought, when all the available water is required, this is pumped back on to the filter beds. The machinery used for this purpose is a portable steam-engine and two small hydraulic engines. There is an arrangement by which the hydraulic engines are set to work by means of a float; by this means the pressure of the water from the mains is used when necessary for pumping the water out of the old aqueduct back to the filter beds, and as the float arrangement works automatically no supervision is necessary.

The Essex part of the station.—There are three sets of filter beds on the Essex part of the station. Of these two sets are arranged round a central wall and, like the Middlesex beds are of somewhat peculiar form (see Fig. 1). The beds, forming the third set are more or less rectangular in form.

Old Essex Beds.—These six filter beds have a total area of six acres. The sides are built of brick with a slope of 2½ to 1. A channel for the filtered water runs in the centre of each and there are two lateral channels which conduct the water into the central one. The air ventilators in connexion with the filtered water channels pass through the side walls of the filter beds. There is no central ventilating shaft. The composition of the filter bed is as follows: Rough ballast, 9 in.; hoggin, 9 in.; sand 2 ft. When the sand is scraped off for cleansing purposes the total thickness is not denuded to a greater extent than six inches before the washed sand is replaced. The thickness of the sand used for filtration is not reduced to a depth of less than 1 ft. 6 in. The filter beds are during the summer cleansed about once a month, and once in six weeks during the winter months. The rate of filtration averages 1,000,000 gallons per acre in twenty-four hours. Another set of beds similar in all respects is situated to the east of the aqueduct.

New Essex Beds.—This series of filter beds consists of six, which occupy an area of about six acres. All these beds are oblong with rounded corners, excepting one which has an irregular form. The beds have concrete walls and are lined with Staffordshire bricks at the upper part. Each bed has one central air shaft as well as shafts in the side walls.

Cleansing sand.—At this station three methods are adopted: (1) sometimes the sand is washed by the water at a pressure of 100 ft.; (2) sometimes it is washed by water at low pressure "hand washing"; and (3) sometimes a special apparatus is used.

The pumping engines on the Essex side, to the west of the aqueduct, are the "Triples," the "Prince" and "Princess," and a set of turbines.

The "Triples."—The engine house is a light structure lined with white tiles. It contains three vertical triple expansion engines of which two are generally kept working, the engines are fitted with Corliss valve gear. The diameter of the cylinders is as follows:—high pressure 20 in., intermediate 34 in., low 57 in.; the stroke is 4 ft., and the diameter of the pump is 30 in. Each engine is capable of pumping 357 gallons per stroke and the rate at which the engines work is from sixteen to twenty-four revolutions per minute. The head of water worked against is about 100 ft., and the engines are used for pumping to the district. The amount which can be pumped daily by each of these engines is 12,000,000 gallons. Steam is generated by six Lancashire boilers which work at a pressure of about 120 lb.

"Prince" and "Princess."—The house containing these engines is situated just at the east of the offices. The engines are of the Cornish type; the diameter of the cylinders is 84 in., and the stroke 11 ft. They pump water into a stand-pipe 140 ft. high, which is situated in the chimney. The head of water worked against is generally about 140 ft. The steam is generated by ten Cornish boilers, which work at a pressure of from 38 to 40 lb. These engines work two pumps, of which the plungers are 45 in. in diameter and the stroke 9 ft., the rate being generally nine or ten strokes per minute. The amount of water pumped is 623 gallons a stroke. The engine house contains an electric indicator for recording the height of water in the reservoir at Finsbury Park.

Turbines—Two Hercules turbines actuate two sets of double-acting pumps, which deliver 26 gallons of water per revolution into the mains supplying the Essex district. The head of water worked against is generally about 180 ft.

At the part of the station to the east of the aqueduct are situated the well, the "Duke" and "Duchess" (horizontal) and "Prince Consort" engines. There is also a residence for the foreman of the Lea works.

"Duke" and "Duchess."—These are two compound engines of which the diameters of the cylinders are 23 in. and 39 in., the length of the stroke being 4 ft. 6 in. and 6 ft. 6 in. These engines work bucket and plunger pumps. The diameter of the buckets is 2 ft. 3 in. and of the plunger 1 ft. 7 in.; the stroke is 5 ft. 7 in. Each delivery therefore amounts to about 139 gallons. The head of water worked against is 174 ft., and the water is pumped to Haggar-lane, Woodford, and Forest Gate. In an adjoining house there is a compound horizontal tandem engine having cylinders with the respective diameters of 23 in. and 40 in. and a stroke of 3 ft. This engine works pumps of which the diameters are 22 in. and the stroke 3 ft. The amount pumped per revolution is 99 gallons. The engine is used as an auxiliary for pumping to Haggar-lane.

Well.—The well is 200 ft. in depth. It has two series of headings—one series at a depth of 200 ft. from the surface and the other at a depth of 140 ft. Altogether there are 7000 ft. of headings. One canal goes in the direction of Walthamstow, the second in an easterly direction, and the third towards the south-west. This well is only used when there is a scarcity of river water. The amount of water pumped from it has been as great as 3,000,000 gallons per day. The engine used for raising the water is a compound tandem well engine, which has cylinders of 24 in. and 44 in. in diameter respectively and a stroke of 6 ft. The pump is worked through bell cranks. The diameter of the bucket is 22½ in. and the length of the stroke 6 ft. The capacity per stroke for the pumps is 206·6 gallons. This engine, the "Duke" and "Duchess," and the tandem engine are worked by steam generated by two Lancashire and three Cornish boilers worked at a pressure of 70 lb.

"Prince Consort."—This engine received its name from the fact that it assists the "Victoria." It is of marine type, with cylinders of 21 in., 33 in., and 56 in. respectively in diameter, it has a stroke of 3 ft. 3 in., and works three plunger pumps which have strokes of 3 ft. 3 in. and a capacity of 361 gallons per revolution. The steam for working the engine is generated by three Lancashire boilers, one of which is fitted with an automatic stoker. The steam-pressure used for working the engine is 125 lb. The head of water worked against is 107 ft. and the water supplies the district

directly without the intervention of any reservoir or standpipe.

The works at Lea Bridge are fitted with an apparatus for carrying coal from the Lea Navigation Canal. The arrangement, which works well, is that a continuous chain provided with lateral arms runs in a cast-iron channel; in this way the coal is conveyed from the barges to elevators which are situated at the engine house. At the eastern extremity of the Company's premises there is a line of rail which joins the Great Eastern Railway; some coal comes in this way by trucks.

Meter house.—There is a house at this station fitted up for testing taps and meters. It was found by the engineer of the Company that a very large amount of water was wasted in the districts supplied because the taps which were fixed in the dwellings of the poor were of very inferior quality and soon got out of order. When this was the case there was, of course, a continual loss of water. The Company tests any taps which are sent for that purpose. They are re-leathered without expense to the customers.

Offices.—The office of the chief engineer and the draughtsman's room are situated at Lea Bridge, and the station is in electric communication with the City offices and the stations at Walthamstow, Chingford, and Haggar-lane.

Waltham Abbey (see D on Map, THE LANCET, May 8th, p. 1291).—The station at Waltham Abbey is situated just at the west of the Lea Navigation Canal and opposite the Government Cordite Factory and about half a mile to the south of the Abbey Church. Here there is a well 200 ft. in depth, with about 600 ft. of headings running in various directions under the property of the Company. There are ten bore holes which pass from 90 ft. to 150 ft. below the level of the heading. The upper part of the wall is lined with iron cylinders 10 ft. in diameter. Chalk occurs at 123 ft. below the surface of the ground which is here 65·5 ft. above ordnance datum. The upper 80 ft. of the well has outside the cylinders an external lining of brick and cast-iron cylinders, of which the diameter is 11 ft. Water is pumped by a triple expansion engine of marine type, which has cylinders with diameters of 18 in., 30½ in., and 51 in. respectively, and a stroke of 3 ft. The deep well pumps are worked off the main shaft by bell-cranks. There are two pairs of buckets of which the diameters are 18 in. It may be of interest to note that this is the first triple expansion engine which was ever erected for pumping water. The steam for working the engine is generated by four water-tube boilers. The amount of water raised daily is about 750,000 gallons, and it is pumped to the districts of Waltham Abbey, Loughton, Woodford, Buckhurst Hill, and Chigwell. The head of water worked against is about 330 ft. On May 12th the engine was being overhauled and was not at work. The engine house is very well lighted by large windows and is lined with white tiles. For artificial lighting electricity is generated by a small vertical high-speed engine. A cottage for the foreman is situated here.

High Beech (see H on Map, THE LANCET, May 8th, p. 1291).—Here is a reservoir capable of holding 2,500,000 gallons of water. It is covered with brick arches and turfed over. The top water line is 371 ft. above ordnance datum. Water is pumped here from Waltham Abbey and from Haggar-lane, and it goes to supply the Essex high-level district.

Buckhurst Hill (see I on Map, THE LANCET, May 8th, p. 1291).—There is a reservoir at Buckhurst Hill capable of holding 800,000 gallons of water. It is covered with brick arches and turfed over. The top water level is 271 ft. above ordnance datum.

Hornsey Wood (see C on Map, THE LANCET, May 8th, p. 1291).—This station consists of a covered reservoir situated in the south-east part of Finsbury-park, near the Seven Sisters-road. It is of oblong form and covered by brick arches. It is capable of holding 5,000,000 gallons. The top water-level is 141 ft. above ordnance datum. The Thames water is pumped here from the Hanworth station through a 36-in. main, and the Lea water from Lea Bridge through a 30-in. main. It serves for the supply of the western part of the Company's district. There is an electric indicator which shows the height of the water in the reservoir, the index is at the station at Lea Bridge. The communicating wire passes underground to Harringay Station, then along the Midland Railway to the Lea Navigation Canal and down the towing path. The reservoir is turfed over, and there are tennis courts over it. The surface of the ground is in the possession of the London County Council.

Haggar-lane (see J on Map, THE LANCET, May 8th, p. 1291).—At this station there are two reservoirs, and machinery for pumping to High Beech. The older of the reservoirs is capable of holding 3,000,000 gallons the top water-level is 171 ft. above ordnance datum. It is covered with brick arches which have a layer of earth, with a little grass growing on it. The newer reservoir has a capacity of 7,000,000 gallons and the top water-level is 181 ft. above ordnance datum. It is covered with arches built of concrete and supported by steel girders. A layer of burnt clay has been placed on the top. The reservoirs are supplied with water from Lea Bridge, and from Walthamstow.

Pumping arrangements.—There are two horizontal condensing engines with 24-in. cylinders which work plunger pumps. The steam is generated by five Cornish boilers working at a pressure of 50 lb. The water is pumped for the supply of the High Beech reservoir and district, and occasionally to Buckhurst Hill reservoir. The head of water worked against in pumping to High Beech is 205 ft. As a rule one engine only is used. It is worked night and day and pumps about 500,000 gallons of water. The grounds of this station are about five acres in extent; they are fenced in and planted with trees. There are two cottages for employés of the Company, and a small workshop.

Communications with other companies' mains.—There are two communications with the mains of the Grand Junction Water Company: (1) at Kew; (2) at Campden Hill. The company can also, if necessary, supply the New River Company with water at Stoke Newington. If this were done the filtered water used by the East London Waterworks Company would pass into the New River and would be filtered again in the ordinary course by that company. This communication has, however, never been used. The New River Company have indirectly supplied the East London Company with unfiltered water when there has been a lack of it. The arrangement made simply was that the New River Company did not take the whole of the amount of water they were authorised to take at Ware, and so the water was allowed to flow down the Lea and was received at the ordinary intake of the East London Waterworks Company at Chingford. Last year during the drought the New River Company supplied water to a considerable amount in this way.

Length of new pipes.—The length of new pipes ranging from 3 in. to 24 in. laid in 1895 was 24¼ miles and during the year 1896 was 21¼ miles.

Hydrants.—The number of hydrants erected during the year 1895 was 15 and during the year 1896 it was 1406.

Houses under constant supply.—The number of houses under constant supply on Dec. 31st, 1894, was 179,167; on Dec. 31st, 1895, 180,500; and on Dec. 31st, 1896, 186,364.

Percentage of houses under constant supply.—On Dec. 31st, 1896, the percentage of houses under constant supply was 99.

Highest supply given.—The highest supply given is at High Beach, 370 ft. above ordnance datum.

Average daily supply per head.—The average daily supply per head for the year 1896 was 33 gallons. These figures are arrived at by the engineer of the Company, as follows. The amount of water supplied is estimated from the known volume delivered by the pumps. The population is estimated from the figures given at the last census, with an addition for the new houses supplied. It is generally known that in different districts the average number of people per house differs very widely. As a rule, however, this fact is not allowed for by water companies in estimating the amount of their water-supply—that is to say, a general average figure is taken to represent the whole district under supply. In the case of the East London Company an attempt is made to find the average of the population per house in each district which is supplied by the Company. In this way a factor is found which is used in the calculation of the increase in each separate district. The population is worked out for each month in the case of each district supplied by the Company and the mean population is obtained by adding together the numbers arrived at for each month and dividing the whole sum by twelve.[2] This method of calculation of course involves a very large amount of clerical work.

Dates of the maximum and minimum supply.—The following

[2] The average population per house in different districts supplied by the Company is found to be: Shoreditch 3·90, West Ham 6·39, East Ham 5·95, Wanstead 5·68, and Leyton 5·83.

table give the date of the maximum and minimum supplies and the average daily quantities supplied.

—	Year 1895. Month.	Year 1895. Quantity in gallons.	Year 1896. Month.	Year 1896. Quantity in gallons.
Maximum ...	February	59,160,000	June	46,870,000
Minimum ...	August	40,750,000*	August	32,760,000*

*Intermittent supply during drought. *Intermittent supply during drought.

Table of Statistical Details given by the East London Waterworks Company for the Year 1896.

SUPPLY.	Average daily supply in gallons...	40,000,000 gallons*
	Percentage delivered for other than domestic purposes, exclusive of waste	About 23 gallons
	Number of houses supplied	183,435
	Number of houses on constant supply	186,798
	Estimated population supplied	1,251,000
RESERVOIRS. Subsiding and storage unfiltered water	Number	9
	Area in acres...	238
	Available capacity in gallons	815,000,000
Storage filtered water reservoirs	Number	7
	Capacity in gallons	13,800,000
ENGINES.	Number	31
	Horsepower	5590
	Greatest lift	500
	Head of pressure in the district supplied	40 ft. to 350 ft.
WATER-PIPES.	Total number of miles of water-pipes	897
	Number of miles of water-pipes in the metropolis...	456
	Number of miles of streets with water-pipes constantly charged in the metropolis	185
	Number of hydrants erected within the metropolis...	3628 public; 2761 private; and 7076 fire plugs
FILTERS.	Number of beds	34
	Area in acres...	31
	Depth of sand and other materials	2·0 ft. sand, 0·6 in. hoggin, and 1·0 foot coarse gravel

* This figure is lessened by reason of the drought causing the interruption to the constant supply in July, August, and the beginning of September.

East London Company.—The Act of 1853 authorises the East London Company to supply the following places:—

Supplied.—Artillery Ground, Bethnal Green, Bow, Bromley, Chigwell, Chingford, Clapton, West Ham, East Ham, Homerton, Leyton, Leyton (Low), Leytonstone, Limehouse, Loughton, Mile End (Old Town), Mile End (New Town), Old Ford, Poplar, Ratcliff, St. George-in-the-East, Shadwell, Spitalfields, Stamford Hill, Stepney, Stratford-le-Bow, Walthamstow, Waltham Abbey, Waltham Holy Cross, Wanstead, Wapping, and Woodford.

Partly supplied.—Hackney, Whitechapel, Bishopsgate, Ilford, St. Botolph Aldgate, Shoreditch, Tottenham, and Woolwich (north of the Thames).

Not supplied.—Islington, Newington, St. Luke Old-street, Barking, Dagenham, Dalston, Holloway, Kingsland, Romford, Shacklewell.

The Company occasionally supplies a small amount of water in bulk to the Cheshunt Urban District Council, Hertfordshire.

NEW WORKS IN PROGRESS.

Walthamstow (see K on Map, THE LANCET, May 8th, p. 1291).—A reservoir which will be called Warwick West is approaching completion at Walthamstow. It will have an area of thirty-seven acres and be capable of holding about 200,000,000 gallons. It will be supplied with water from No. 5, the Racecourse, and the East Warwick.

Lea Bridge.—Near the "Prince Consort" engine house a well is in course of construction. The depth at present is about 145 ft., and the chalk was reached at 85 ft. The diameter of the well is 12 ft., and iron cylinders have been sunk to the level of the chalk.

Rammey Marsh (see E on Map, THE LANCET, May 8th, p. 1291).—A well is being sunk at Rammey Marsh. The ground level here is 53 ft. above ordnance datum. The well has reached a depth of 66 ft. from the surface, and at this depth the work is still being carried on in the London clay. There was about a foot of surface soil, and 18 ft. of ballast above the London clay. The upper 25 ft. of the well is surrounded by iron cylinders, of which the diameters are 15 ft., and brickwork, of which the internal diameter is 14 ft.; the lower part is lined with iron cylinders, of which the outside diameters are 12 ft.

Ponder's End (see F on map, THE LANCET, May 8th, p. 1291).—The new station here is situated at a level of 40 ft. above ordnance datum. A new well is being sunk here; the depth reached is 109 ft., at which level chalk has been reached.

Barking (see M on map, THE LANCET, May 8th, p. 1291).—This place is situated at 10 ft. above ordnance datum. A new well is being sunk here. The depth reached is 200 ft. Some headings have been driven at the bottom of the shaft. Chalk was reached at a level of 145 ft.

Ferry-lane.—At this station a new well is being sunk; the depth now reached is about 140 ft., and at this depth the upper level of the chalk is situated.

THE LANCET SPECIAL COMMISSION ON SICILY AS A HEALTH RESORT.

IN the year 1895 a number of Sicilian gentlemen of high rank and social position formed themselves into an association with the object of promoting the progress of their country, and more especially with the view of developing it as a health resort. This body entitled itself the "Associazione pel Bene Economico," and its members were as follows: Count Mazzarino (President), Mr. Joshua Whitaker, Commendatore Ignazio Florio, Signor Giovanni Guccia, Prince Scalea, Count Caltanissetta, Commendatore Ignazoi Greco, Cavaliere Alberto Ahrens, Prince St. Elia, Count Ferdinand Monroy, Signor Guglielmo Helg, Commendatore Eugenio Oliveri, Cavaliere Michelangelo Siciliano, Cavaliere Napoleone La Farina, Cavaliere Carlo Albanese (secretary), and Signor Lo Presti (vice-secretary).

It seemed to the members of this influential association that one of the most effective means of accomplishing the ends which they had in view would be to have a thorough inquiry instituted by some independent and competent authority into the climatic, hygienic, sanitary, and other conditions prevailing in the Island of Sicily, and that the results of this inquiry should be made public through some authoritative channel. With this purpose the association approached the Editors of THE LANCET and invited them to send a Special Commissioner to Sicily for the above object. Believing that such a Commission would not only be likely to benefit the Island of Sicily, but also to advance the interests of medical science, we willingly acceded to this request of the "Associazione pel Bene Economico." Our Special Commissioner in due course arrived in Palermo, where he was most kindly received by the representatives of the Association, who took instructions from him regarding the objects and methods of his Commission and who facilitated his investigations and inquiries by every means in their power. We feel specially indebted to Mr. Joshua Whitaker and Cavaliere Carlo Albanese for the great amount of time and labour which they devoted to forwarding the work of this Commission. The method pursued by our Special Commissioner was as follows:—

1. The collection of all the available data bearing upon the meteorology and climatology of Sicily. For this purpose the admirable records of the various

meteorological observatories in the country were found to be of great value. Several of these observatories were visited personally by our Special Commissioner and all records were freely put at his disposal. To Professor De Lisa of Palermo he is specially indebted. Full particulars will hereafter be given regarding meteorological observations at the following places: Palermo, Catania, Syracuse, Girgenti, Termini, and Taormina.

2. The collection of information relating to the flora and geology of Sicily, in so far as such information would be likely to throw light upon the climatic and hygienic condition of the island. The various botanical collections were inspected, and our Special Commissioner feels particularly indebted to Professor Borzì, Director of the Orto Botanico of Palermo, both for his personal courtesy, and for the valuable memorandum which he has furnished regarding the special features of the Sicilian flora and the remarkable results of experiments in acclimatisation made at Palermo.
3. The collection of statistics relating to the state of public health in the various localities, drainage, sanitation, prevalent diseases, and the results of treatment in the case of invalids wintering in Sicily.

The medical profession in Sicily responded most kindly to the inquiries of our Special Commissioner, who owes valuable information especially to the following gentlemen: Professor Giuffrè (Palermo), Professor Cervello (Palermo), Professor Ughetti (Catania), Professor Lancetta (Girgenti), Professor Perez (Palermo), Dr. Migneca (Catania), Dr. Menzalora (Termini), Dr. Formica (Girgenti), Dr. Palumbo (Castelbuono), Dr. Marchesano (Palermo), Dr. Berlin (Palermo), Professor Mattei (Catania), Professor Manfredi (Palermo), Dr. Martinez (Girgenti), Dr. Cacciola (Taormina), Professor Ciofalo (Termini), Dr. Corselli (Palermo), and others.

4. Inquiries into the mineral springs of Sicily, the various sources of water-supply, methods of distribution, &c. The results of the examination in THE LANCET laboratory of the chief potable and mineral waters of Sicily, specially forwarded for the purpose, will form portion of the reports of our Special Commissioner.
5. An inquiry into the nature of the accommodation available for invalids and other travellers.

Our Special Commissioner personally visited the principal localities in Sicily in addition to Palermo—viz., Catania, Girgenti, Syracuse, Messina, Taormina, Castelvetrano, and many others.

His reports are in a forward state of preparation, and we hope to commence their publication in an early issue. We believe they will be found to comprise the most complete account of Sicily—from the climatic and hygienic point of view—which has hitherto been published.

In addition to the gentlemen already mentioned we desire on behalf of our representative to acknowledge his indebtedness for information and assistance of various kinds to the following:—Count Mazzarino, Dr. W. W. Baldwin (Florence), Professor Zona (Palermo), Professor Gemmellaro (Palermo), the Marchese di Gallidoro, the Marchese Antonio di Gregorio, Signor Emmanuele Calcagno (Palermo), Ingeniere Ignazio Greco, Ingeniere Enrico Bottone D'Anna (Palermo), Mr. Sammuele Hamnett (Palermo), and Signor Cipollina (Girgenti).

THE SANITARY CONVENTION OF VENICE, 1897.

No. III.[1]

BESIDES the general maritime regulations which are framed with the view of preventing the importation of plague into Europe and of controlling that disease, should it unhappily make its way into the basin of the Mediterranean, the Venice Conference arrived at a large number of conclusions which aim at preventing any spread of the disease through the agency of the pilgrimage to Mecca. In view of the immense Mussulman population under British rule, and of the fact that ports on the west coast of India are largely resorted to as starting-points by pilgrims from countries north and north-west of British India, these conclusions have an important concern for this country. They are, in the main, based upon the conclusions of the Paris Convention of 1894, which aimed at controlling the spread of cholera by the pilgrimage, but they are to some extent modified by reason of the fact that the period of incubation for plague is deemed to be twice as long as that for cholera.

Roughly speaking, the measures embodied in the Convention may be divided into action taken at ports of departure, during the voyage, and on the return journey. In the first place, pilgrim vessels are defined, their construction and sanitary arrangements are strictly controlled; the upper deck must be kept clear for pilgrims, and on the main covered deck every pilgrim is to have at least sixteen square feet of surface. Every one going on board has to pass a medical examination; female medical practitioners are to be employed in the case of women pilgrims; no sick person, or person suspected of infectious sickness, may go on board; the number for which the vessel is licensed is set out, and the names of all passengers are inscribed on board. Provision is made as to the quality and cost of food supplies and also as to the wholesomeness of water, of which a proper quantity must be gratuitously provided. A portion of the vessel has also to be set apart for cases of sickness needing isolation. Every pilgrim vessel must carry one medical man or more and a disinfecting stove on board. Many details are set out as to the medical inspection, disinfection, and measures of cleanliness to be maintained during the voyage; and then come the regulations as to landing of all the pilgrims at the island of Camaran in the Red Sea before proceeding on the last stage of the voyage to Jeddah. Much discussion has taken place during recent years as to Camaran, many holding that this so-called sanitary station has been little better than a hotbed of disease and a source of danger to pilgrims, who are besides subjected to many extortions there by Turkish officials. Hitherto all pilgrims have had to stay there ten days under supervision, but that is now reduced under the Venice Convention to three days; and the detention of pilgrims from healthy vessels is only intended to cover sufficient time for cleansing the persons and linen of the pilgrims once more by baths and otherwise before they continue their voyage. But nearly everything at Camaran depends on the action to be taken by Turkey, the Government of which has, subject to certain reservations, now intimated its acceptance both of the Paris and the Venice Conventions. It must be admitted that the Turkish administration is at last making a move at Camaran, but much pressure will probably have to be exercised before all is done that will make the stay of large bodies of pilgrims at that station even safe.

But assuming that no disease appears during the three days' stay there, then the pilgrims embark again and go straight to Jeddah. If disease has appeared either before or after landing at Camaran, the pilgrims are detained for at least ten days from the date of the last case. At Jeddah matters pass beyond the influence of international conventions, for from that point forward the pilgrims are on Turkish territory and must submit to Turkish rules and demands. But having regard to the notorious sanitary defects at Jeddah, Mecca, and elsewhere, and to the cruel loss of life which is a necessary result of the land stages of the pilgrimage, urgent recommendations have been made to the Sultan to use some at least of the large sums taken from the pilgrims as sanitary dues and in other ways in providing somewhat better for their obvious needs.

The convention deals with a large number of other sanitary stations in the Red Sea. But since these have to do either with the Mussulman pilgrims from the Dutch Indies, or with those coming from countries bordering on the Mediterranean, they have only a very indirect interest for this country. As regards the return journey of our Indian pilgrims no restrictions are necessary, for the Indian Government desire, in the pilgrims own interests, to let them go on board again as soon as practicable. But the restrictions on pilgrims returning north, or into Egypt, are numerous and severe.

Whether plague or cholera is in question one of the greatest dangers that has to be faced lies in the land routes across Mesopotamia and the Arabian Desert, and in the resulting caravans. Rules are laid down as to the control of

[1] Nos. I. and II. were published in THE LANCET of May 1st and 15th, 1897.

these at frontiers and other places; but having regard to the uncivilised nature of the countries and peoples in question it is hardly likely that anything material will be done along many of these routes for the prevention of disease and for the maintenance of proper sanitary conditions amongst the pilgrims. The conclusions relating to land traffic and land frontiers and to the practices of disinfection which are advocated in the Convention have a somewhat closer concern and interest for us. The frontier between European and Asiatic Russia has always been a source of anxiety when cholera has travelled northward and westward from British India, and it has become still more so since the railway was laid down from Turkestan to the shores of the Caspian. Should plague move in that direction, the danger will be much the same, and though we may think some of the regulations as to land frontiers excessive in their requirements, we must remember that there are none that we are obliged to impose ourselves, and that as regards some land frontiers great public health interests are involved. But it has fortunately been decided that there are to be no more land quarantines. When exotic disease is prevailing, the worst thing that can be done is to aggregate people together under conditions which alone are available on most land frontiers. Hence it is laid down by the Convention that whilst land quarantines are abolished, their place should be taken by modern methods, such as medical inspection, disinfection of infected and suspected articles, &c. Where railways run across frontiers this will be practicable, but there are other frontiers where it would be impossible to establish the necessary organisation at the several points where land traffic and movements of people take place. Hence the Convention meets such a case by permitting any country to close its land frontier either at specified points, or altogether, when plague is prevalent in an adjoining state. This, in our opinion, is preferable to resorting to the antiquated and often cruel system of land quarantine.

The principles of disinfection laid down by the Convention are fairly modern ones. But in their application they are largely permissive, and it is quite possible that action that *may* be taken by one or another country goes beyond anything that we deem necessary or shall ever take in this country. The fear of infected linen as a vehicle of disease is great on the continent, and since every article that has been worn is looked upon as soiled and hence possibly infective, very harassing restrictions may come to be imposed on travellers. But whilst this country cannot impose its views on other ones in this matter, we have at least the satisfaction of knowing that, with very few exceptions, disinfection is purely permissive and not obligatory, and that we, though adhering to the Convention, can have none of these excessive measures forced on us to be adopted in our own country. Indeed, almost the only articles the disinfection of which on admission to a country is compulsory on the contracting Governments are articles of clothing travelling by parcel post. With us these are often the clothes of English soldiers and sailors who have died in India, and they are admittedly so dangerous when plague is about that our Post-office regulations for the moment altogether prohibit their dispatch from India. The question of merchandise may also be regarded as satisfactory. Contracting Governments are not obliged to prohibit the importation of any single article; but there are certain things that any country may prohibit if it chooses, such as rags, sacks, carpets, &c. that have been in actual use, fresh and untanned leather, and the débris of animals, such as hair, hoofs, &c. In this country we have very little belief in danger even from these articles, and we have as yet placed no prohibition upon their importation. But we cannot force this view on others, although we may deplore that Indian merchandise of the sort referred to should be refused entry into other countries, even though plague may prevail in the port of shipment or in the country whence the articles are derived. Happily it is laid down that all letters and postal correspondence are to be altogether unhindered, and thus we avoid the silly practice of fumigating sacks which hold letters and which have in advance been made impenetrable to any fumigating material by reason of their having been coated with tar. Many similar trivial practices are condemned by the Convention which exhibits a very distinct stage of advance in the direction of modern opinion based on increasing scientific knowledge.

With the results of the Convention, in brief, the British public health administration has distinct reason to be satisfied. It, of course, contains provisions, the application of which is permissible, which we in this country have long since discarded; but it imposes on us nothing that we hold to be undesirable or unnecessary. Some countries can, under the Convention, take action which we shall regret, and which, whilst affording them no real protection, will tend to hinder new commerce; but it is clear that previous Conferences have done much to educate retrograde advisers of other States up to a standard which approaches much nearer to our own than we could have anticipated; and we may reasonably look forward to a time when the repeal or further ratification of existing Conventions comes round, at which even further advance will be made in the only direction that has an intelligibly scientific and practical basis on which to rest.

THE USE OF INCUBATORS FOR INFANTS.

THE employment of incubators as a means of saving the lives of prematurely born or of very weakly infants has not yet become general in England. Yet it is notorious and obvious that the best, almost the only, means of saving such infants is to protect them absolutely from change of temperature and from cold. For such purposes children used to be wrapped up in wadding or in a sheep skin with the wool adhering. The peasants of Silesia and Westphalia sometimes placed infants in a jar full of feathers. In England the cot or cradle was put close to the hearth, and it was necessary to watch the fire day and night so that the temperature might not vary. The use of hardware hot-water bottles inserted in the bedding of the cot is also a very general practice, and this method is adopted in many maternity and other hospitals. But such devices are not uniformly reliable; their success depends upon the intelligence and assiduous care of the attendant, and the accidental opening of doors or windows, an unexpected and sudden gale, or a fall of temperature may defeat the effect even of the most elaborate precautions. Some sixty years ago, however, Dr. Crédé, of the University of Leipzig, sought to effect an improvement on these primitive and unreliable methods. He constructed a sort of box with double metallic sides; the space between these walls could be filled with hot water so as to maintain the desired temperature within the box. The infant, covered with blankets and resting in a basket or cradle, was placed inside. Incubators of this description are still employed at the Charity Hospital, Berlin. In 1878 Dr. Tarnier, when visiting the artificial couveuses installed by M. Odile Martin at the Jardin d'Acclimatation for the rearing of poultry, thought that he might utilise a similar apparatus in the case of prematurely born children. M. Odile Martin was therefore requested to construct a couveuse sufficiently ventilated and large enough to hold one or two infants. This was done, and the first couveuses were introduced at the Paris Maternity Hospital in 1880. They constituted a noteworthy step forward in the right direction, but the apparatus had to be warmed anew three or four times a day, and its successful employment depended on the care and watchfulness of the attendant. Good results nevertheless ensued and many lives were saved. Dr. Vallin, in a report presented to the Academy of Medicine of France (Nov. 12th, 1895), said: "We are obliged to regard as prematurely born all infants who do not weigh at birth 2 kilogrammes 500 grammes (5 lb. 9 oz.), and they are numerous, for the proportion is set down at from 15 to 30 per cent. of the births. The minute and delicate care which these weakly infants require, especially in winter, to protect them from cold is so great that till now most of them have died"; but Dr. Vallin added that "since Dr. Tarnier introduced at the Paris Maternity Hospital the ingenious contrivance called a 'couveuse,' a large number of these infants have been saved. This apparatus, however, cannot be readily employed. It is necessary that a number of experienced persons shall be always in attendance, for a delay of twenty-four to forty-eight hours might result in the death of the new-born infant." Dr. Jules Rouvier, of Beyrouth, in his interesting paper on Infant Mortality, read at the International Congress of Hygiene held at Budapest in 1894, estimates that among the newly born debilitated infants are in the proportion of 5 per cent. Of these infants born in a state of enfeeblement

only 20 per cent., according to Uffelmann, live twelve months, and 11 per cent. two years. The greater number die during the first day or the first week of their existence. Of 1961 children born at the Paris Maternity Hospital, in 1881—that is, before the introduction of the couveuse—641 were premature births. The mortality during the first two weeks of the prematurely born amounted to 32 per cent.; that of the other infants was equal to 8·62 per cent.

In England the question of incubators is of particular interest, for though the general death-rate of infants has decreased considerably of late years, the death-rate due to premature births has, on the contrary, greatly increased. This increase has been set down by some authorities as equal to 40 per cent. The London tables of mortality show that whereas the deaths registered as due to premature birth amounted to 1930 in 1886, this figure rose to 2534 in 1896. To this we should also add that a large though unknown number of deaths attributed to various diseases are indirectly caused by premature birth. Under these circumstances any successful attempt to improve the construction of incubators and to render this life-saving apparatus available to the general public must be welcome. That this has been achieved will, we are informed, shortly be rendered evident by a remarkable exhibit at Earl's Court. A structure is now in the course of erection just opposite the Welcome Club, where infants prematurely born will be nursed and kept in new and model couveuses. The main feature of this new incubator is the fact that it requires no constant and skilled care. It works automatically; both ventilation and heat are maintained without any fluctuations whatsoever, not only for hours, but even for days. The incubator need not be touched for these purposes, and the only attendance necessary is that needed for feeding and washing the infant. The heating is produced by hot water, which circulates in copper piping placed at the bottom of the incubator under the cradle or hammock. This pipe is fed by a water boiler, which stands outside the incubator, and may be heated by an oil lamp, by gas, or by electricity. The temperature is automatically maintained at the required heat by a specially constructed thermostat. This is made in the shape of a W composed of two metals, the one being quick to expand and the other to contract. One side of the W is fastened to the wall of the incubator. The W, thus standing out from the wall, widens with heat and contracts with cold. The loose end of the metallic W is connected with a system of levers. On the outside a very light chain hangs to the lever that comes through the wall of the incubator. When the temperature inside the incubator is beginning to exceed the limit for which the apparatus has been set—and this limit can be varied according to circumstances—the W thermostat expands and so works on the levers that the chain is drawn upwards, and by this action the gas or the lamp is turned down and the supply of heat to the boiler is decreased. The temperature within the incubator consequently begins to go down. The thermostat then contracts, the chain falls, and the gas or lamp is turned on again to the full. Thus whatever changes may occur outside the incubator the temperature within regulates itself. So delicate is the construction of this thermostat and the levers attached that the slightest variation of temperature suffices to set it in motion. Thus the heat within the incubator never varies more than two degrees Fahrenheit. Another system consists in having a hollow centre passing through the boiler, and the burner is placed in this aperture. The opening is closed at the top by a cone-shaped lid attached to the chain. When the thermostat expands it lifts this lid, so that the heat passes through and the water begins to cool.

To ventilate the incubator there is a pipe, which is conducted through the wall or window of the house or hospital. Only air taken outside the building is supplied to the infant within the incubator. When we consider how often private houses, and even hospital wards, are inefficiently ventilated, it is not necessary to insist on the advantage of deriving the air-supply direct from the street or garden. This pipe, about four inches in diameter, delivers the outside air into a box fastened to the side of the incubator. The air is first moistened and washed by being passed through a layer of absorbent wool suspended over a saucer containing water or an antiseptic solution. A little further on there is another sheet of wool, which, however, is dry and serves to retain the soot and other particles floating in the air. From this filtering box a second pipe delivers the air into the bottom and centre of the incubator. Just above this inlet a disc is suspended, which breaks up the current of air and diffuses it in all directions and over the surface of the hot-water coils. Thus, the air is washed, filtered, and warmed before it reaches the infant lying above in the upper part of the incubator, and is uniformly distributed so that there is no sudden current in any one direction. On the top of the incubator a chimney about three feet long forms the outlet, and so that this should not accidentally become an ilnet, admitting a downward draught, a revolving screw-fan is placed within this flue, which only turns to allow the outward passage of an upward current. Thus it will be seen that, so long as the lamp or the gas burns, the temperature and the ventilation within the incubator will be automatically maintained. The incubator is made of glass and metal, and, therefore, it can be washed and disinfected with the greatest promptitude and facility. It is so portable that it can be readily carried from room to room, or placed in a cab, and taken to any house wherever required. As no skilled attendance is needed it can be used in private families as well as in hospitals. So far incubators have been available only for the rich or the poor. For the great middle class, persons who are not rich, but who are not poor enough to go to the hospital, there are as yet no incubators available. It is proposed, however, to meet this difficulty. In London and in other large centres incubator stations will be established. In response to a message or a telegram incubators will be despatched immediately wherever they are required. This will not occasion any great expense, for the incubators need not be bought nor will it be necessary to pay for skilled attendants. The incubators will be let out on hire for the number of days they may be required, and thus it may be possible to save the lives of many prematurely born or particularly delicate infants.

HISTORICAL NOTES ON MEDICINE, SURGERY, AND QUACKERY.

IV.[1]

AT the commencement of the present century St. Anne-street was the most distinguished thoroughfare in Liverpool, and was looked upon as a rival to Rodney-street. It so continued until 1835, when the tide of fashion began to sweep southward and afterwards extend towards Aigburth. In St. Anne-street resided Thomas Stewart Traill, M.D., an eminent physician and a ripe scholar, as did his brother-in-law, Mr. Sandbach, the merchant prince, who was mayor in 1831, and whose house was the first erected in the street. Dr. Traill was professor of chemistry in the Liverpool Royal Institution and lecturer in different branches of natural philosophy. He was physician to the Liverpool Ophthalmic Infirmary. Several valuable papers by him appeared in the memoirs of the Wernerian Society, in the *Edinburgh Philosophical Journal* and in other works. On leaving Liverpool he went to Edinburgh, where he became professor of medical jurisprudence and edited an edition of the "Encyclopædia Britannica." There is a fine portrait of this gentleman in the Royal Institution, Liverpool. There is also a bust of him extant. At a public meeting, convened with the concurrence of the leading men of all parties, held in the music hall, Bold-street, on June 8th, 1825, the subject of establishing a Mechanics' Institute in Liverpool was introduced by Dr. Traill in a clear and lucid speech. Other speakers addressed the crowded and enthusiastic assembly. An influential committee was formed, Messrs. John Gladstone, M.P., and John Moss, with Dr. Traill, being appointed vice-presidents. The institution was immediately organised, and flourishes to-day as the Liverpool Institute in Mount-street. The name of Dr. Traill appears among those of the gentlemen who cordially supported Mr. Sandars, when he projected the Liverpool and Manchester Railway.

At a public meeting, held in Liverpool on Dec. 14th, 1830, for promoting the cause of Reform in Parliament, Mr. Thomas Blackburn, surgeon, opposed the ballot, observing that a "man ought to vote openly and boldly, and if the right of voting were given to the wealthy and intelligent members of

[1] Nos. I., II., and III., were published in THE LANCET of March 6th, March 27th, and April 10th, 1897, respectively.

the community the vote by ballot would be quite unnecessary. No reform of the House of Commons would have any good effect which did not render the vote by ballot absolutely unnecessary." The last election in Liverpool had cost the two candidates about £115,000.

Rodney-street has always been a favourite locality of the medical profession. Towards the close of the last century the district of Rodney-street, Upper Duke-street, and Hope-street was all unbuilt upon, being in some parts cultivated land and in others growing nothing but furze and heather. Rodney-street was projected about 1780. It is a current tradition that it was first proposed to call the new street "Schlink-street," to perpetuate the name of a Dutchman who had purchased a considerable portion of land. The name, however, being very objectionable, as one that was suggestive of prematurely and newly born calves converted into veal, it was changed in 1782 to Rodney-street, the gallant Admiral Rodney having in that year defeated a fleet of French line-of-battle ships off Guadaloupe. This, no doubt, changed the destiny of the street, for there is a good deal in a name after all. We cannot imagine the great Dr. Parker Pepps living in Schlink-street, but "Dr. Parker Pepps of Rodney-street" impresses us at once as being according to the "eternal fitness of things" professional. In 1807 there were many portions of Rodney-street unbuilt upon on which grew heather and furze about the sandpits abounding in the vicinity. Dr. Gouldie, a celebrated physician of his time, lived in this street, as did Dr. Scott, the celebrated lecturer, and Dr. Brandreth. This was Dr. Brandreth the second, who married Miss Harper, one of "the lasses of Ashbourn," whose father, William Harper (one of the wealthiest men of his day and Mayor of Liverpool), never forgot to "toast" them at his own table. Old Dr. Brandreth lived in School-lane at one time, and in the year 1774, at 7, Church-street. Dr. Manifold, a highly esteemed physician, had a house in Rodney-street. Mr. Bickersteth, who dwelt near Mount Pleasant, was considered as skilful and dexterous in the conducting of an operation as Sir Astley Cooper. Thirty years ago that clever, kindly, dapper, but peppery little man, Dr. Seaton Smyth, lived in Rodney-street. Every other morning his coach-house in Roscoe-street, at the back, was filled with non-paying cancer and other patients; on other days they attended at the house in Rodney-street. The unpardonable sin which these people learned to avoid committing was treading on the pet dogs which surrounded the doctor. The doctor's carriage was generally drawn by cream-coloured ponies, which attracted considerable attention. The death of Dr. Seaton Smyth in the prime of life was a great loss to the poor of Liverpool.

To go back to an earlier period in the history of Rodney-street, mention must not be omitted of a personage who lived there and who played pranks on two or three Liverpudlian medical men. Allusion is made to Mr. D'Altera, or "little Joe," as he was called by his familiar friends. Joe was chairman of a celebrated society called the "Committee of Taste" or "Minions of the Moon," the members of which were fast young men who objected to the shape of their neighbour's knockers, signs, and so forth. Joe himself was one of the merriest, wittiest, and most thirsty souls in the town. The "Committee of Taste" carried on a long war with Mr. Parke, the famous surgeon, touching the shape of his knocker, which, in a fit of waggish displeasure, they had excommunicated. It was no light thing to cross these gentry, and though the surgeon kept putting up the knocker with commendable regularity and courage, the "Minions of the Moon" were equally diligent in wrenching it off. It is probable that the committee won in the end. Mr. Parke, when a very young man, attended in his professional capacity the French prisoners confined in the Tower in Water-street during the war with France which broke out in 1756. He was a man of great talents and extensive practice. In the year 1776 he went to reside in Basnett-street, which was then considered so much in the outskirts of the town that his friends thought him indiscreet in establishing himself in a situation where his patients would have to follow him to so great a distance. This fact alone speaks volumes for the marvellous development of Liverpool during the last 120 years. Mr. Joe D'Altera and his "Committee of Taste" once played a trick on Mr. William Wallace Currie, the eldest son and biographer of the great Dr. Currie, who wrote the life of Robert Burns. Mr. W. W. Currie was a notable man in his day, and filled the Mayoral Chair in Liverpool in 1836. He was not a man to take kindly to a practical joke; indeed, few people do, except the perpetrators. Imagine, then, the feelings of this grave and cultured namesake of Scotia's darling hero on his arrival at his office one morning when he saw his name on the door transformed into "William Wallace, Currier"! On another occasion the "Committee of Taste" fell foul of a certain Dr. Solomon, who then lived in a large house at the top of Low Hill. His grounds were studded over with statues, which he was not a little proud. They were voted to be not of classical by the committee, and the decree went forth for their removal and was carried out on the appointed night, when they were all taken from their pedestals, the "Old Charley" of the beat being either asleep or feed or frightened into silence. This Dr. Solomon was a remarkable character. He was the inventor and proprietor of the celebrated "Balm of Gilead." In 1816 he resided at the junction of Great Newton-street and Dansie-street, where the latter runs into Brownlow-hill. His house was at the corner of the street, his gardens extending into Brownlow-street. This part of the street was then called Solomon's place. From this place Dr. Solomon removed to Gilead House, Kensington, where he hospitably entertained his friends. He drove four horses in a dashing carriage. On one occasion he followed the coach of Lord Sefton (who was one of the most expert whips of his day) to Heywood's Bank, where the two vehicles pulled up together. Dr. Solomon in flourishing his long whip contrived to get the thong so inextricably entangled round his body that he was obliged to call his groom to assist him cut of the predicament. On one occasion a guest, when the bottle had circulated freely, and "all went merry as a marriage bell," asked the doctor why he did not treat them to the celebrated "Balm of Gilead." Dr. Solomon replied that he should be happy to do so if those present wished it. The price of the "Balm" was a guinea a bottle. The party expressing a desire to taste the famous compound, half-a-dozen bottles were ordered in, which were duly consumed and highly relished. On the party breaking up each guest was favoured with a little bill of his share of the expense of the "Balm." On Dr. Solomon being taunted with wishing to make his company pay for their entertainment, he reminded those present that it was by the sale of his "Balm of Gilead" that he was able to treat them so hospitably and to make them welcome to his well-spread board. He therefore insisted upon being paid for his "Balm" as specified in the "bills delivered." When the fact oozed out Dr. Solomon's conduct was highly applauded, while the guests at the feast were heartily laughed at. Dr. Solomon once played a trick on a Custom House officer. The doctor, having shipped a case of "Balm of Gilead" to go abroad, the Custom House officer, finding the value declared so much below the usual selling price of the article, seized the package. On Dr. Solomon finding his "Balm" had been detained he became very wrath and determined on revenge. He thereupon sent another package to the docks for shipment, which was made up precisely like the former, with the same description of bottles, labels, and wrappers. These bottles, however, only contained common spirit, sugar, and water. Supposing that they contained the real stuff the man seized the package. Dr. Solomon refusing to release it, it was thrown on the officer's hands, who found afterwards to his cost of what the contents of the bottles consisted. Dr. Solomon chuckled gaily at the success of his scheme, declaring that he "vood teach dem to seize his goots." Dr. Solomon started Lord Sefton in the election of 1818. The flags were all painted at Gilead House, and cost at least £1000. Such a quantity of ribbons of his lordship's colours was given away by Dr. Solomon that there was one family in the town who had, many years after, quite a large stock remaining of what was then given to them. It is said that Dr. Solomon gave the land for the Wesleyan Chapel in Moss-street. A story is told of some medical students stealing a favourite broad-brimmed white hat belonging to Dr. Solomon, who, on the discovery of his loss, had the town placarded with savage bills offering a reward for the apprehension of the offenders. Dr. Solomon erected a mausoleum on the Mossley-hill Estate for the reception of his wife's and children's remains and for his own resting-place. It stood on a picturesque delf, and was for many years an object of remark. It is now entirely swept away.

"Dr. Solomon," says Sir James Picton in his "Memorials of Liverpool," "was for many years one of the institutions of Liverpool. Long before Holloway's Pills were heard of or Morrison had established his 'British College of Health,' Solomon's 'Balm of Gilead' had penetrated to the utmost

bounds of the habitable globe. The Doctor was a gentleman of the Hebrew nation, who commenced his medical career in a very modest way in Marybone, Tithebarn-street, some time before 1796. The precise period when the Balm of Gilead first diffused its soothing influences over the ills of humanity I cannot accurately determine, but by the end of the century it had become very popular. From Marybone Dr. Solomon removed to Brownlow-street about 1800. In 1804, wealth and reputation increasing, he built himself a noble mansion at Kensington Liverpool, and called it, 'Gilead House,' where he resided until his decease. Gilead House, or Dr. Solomon's as it was familiarly called, was for many years the first house in approaching Liverpool from the eastward and attracted great attention from the beauty of the grounds and the trim style in which they were kept. The Doctor died about 1819, and was interred in a mausoleum he had erected for himself on an estate belonging to him at Garston. Many years after his decease the estate was sold by his representatives, his remains removed to one of the cemeteries, and the mausoleum pulled down. Well might the philosopher of Norwich say, 'All was vanity, feeding the wind and folly. The Egyptian mummies, which time hath spared, avarice now consumeth. Mummy is become merchandise, Mizraim cures wounds, and Pharaoh is sold for balsams.'" Gilead House was dismantled, and the land sold for building about 1846. Professional men attending patients in the streets which take their names from the great legal dignitaries—Cottenham, Denman, Coleridge, Weightman, Patteson, Rolfe, Coltman, and Pollock—will be interested in knowing that they cover the land formerly occupied by Gilead House, and its trim parterres and close-shaven lawns, which in the old coaching days were grateful to the traveller's eye as a harbinger of home after a long and tedious journey.

During the political excitement of 1818 Dr. Solomon issued the following circular:—

"WORTHY FREEMAN AND DEAR SIR,—The honour of your attendance is earnestly requested at Gilead House on Thursday morning next, the 18th inst., to proceed with the full band of music and colours to the tally, when I shall have the honour personally to accompany you as the friend of Lord Sefton, and the rest of my honest set of staunch fellows, who are in my list of Freemen, to regain for yourselves and brave companions the blessings of real freedom.—I am, Sir, your most faithful, obliged, and very humble servant,

"Gilead House, June 16th, 1818." "S. SOLOMON, M.D.

In Mr. T. B. Browne's "Survey of the History of the Newspaper Press" it is stated that the first attempt to establish a daily newspaper out of London was originated by Dr. Solomon, the patentee of the well-known "Balm of Gilead." This was the *Mercantile Gazette and Liverpool and Manchester Daily Advertiser*, the first number of which appeared on Aug. 6th, 1803. The Doctor appears to have been imbued with an advertising spirit in advance of his time, and the demise of his interesting daily paper was probably due to toxical doses of the "Balm of Gilead" administered in the form of undiluted puffs. It is regrettable to find that this "truly great man" has been dismissed in the following irreverent and unbrotherly fashion by Dr. Robert Watt in the *Bibliotheca Britannica*: "Solomon, Samuel, M.D., a Jewish quack, notorious for his 'Cordial Balm of Gilead,' died about 1818. A Guide to Health, or advice to both sexes in nervous and consumptive complaints, scurvy, leprosy, and scrofula; also on a certain disease, seminal weakness, and a destructive habit (onanism) of a private nature, &c., &c. 56th edition. West Derby, dateless, 12mo, 3*s*. A thing of shreds and patches from the author's own advertisements and Aristotle's Master-piece."

In a house in Mount-pleasant, which in after years became the Eye and Ear Infirmary, but is now a laundry, dwelt Dr. James Carson after his removal from Ranelagh-place, where he had lived from about 1817 to 1830. He had a board put up near his late residence intimating the alteration of his whereabouts. Just at that time Dr. Carson was recommending the copious use of water to his dyspeptic patients at mealtimes and was insisting upon it that it was "a perfect cure" for that complaint. One night Dr. Carson's signboard was removed and replaced on the following morning with the addition to the address of "Take Notice, opposite the Pump," referring to the pump in the street facing Dr. Carson's house. The trick caused a good deal of joking at Dr. Carson's expense. Dr. Carson was the author of "An Inquiry into the Causes of the Motion of the Blood, with Appendix," Liverpool, 1815, and "Physiological Essays," 1822.

In the middle house in Trinity-place, behind St. Anne's Church, in 1808 resided Mr. Charles Angus, a surgeon, or at least one who was in some way connected with the medical profession. With him lived a Miss Burns, his sister-in-law, who acted as his housekeeper and governess to his children. Mr. Angus was a widower and had been to sea. Miss Burns in the month of March of the above year was taken unwell, and it was suspected that she was *enceinte*. On March 23rd she remained in the breakfast-room all day, suffering from excessive thirst and vomiting. Mr. Angus sat up with Miss Burns the night of that day, watched over her the following day, and again tended her on the next night, allowing no one to share his task. On the 25th Miss Burns told the inmates of the house that she was much better, and expressed a wish to have some Madeira wine. A servant having been sent for some, on her return found Mr. Angus asleep in a chair and Miss Burns dead in the corner of the room. Mr. Angus was taken into custody charged with the murder of the young lady. He was tried for this alleged offence at Lancaster on Sept. 2nd before Sir Allan Chambre. Sergeant Cockle, with Messrs. Holroyd, Raine, and Clark, was for the prosecution, and Messrs. Topping, Scarlett (afterwards Lord Abinger), and Cross were for the prisoner. The evidence was most conflicting, but there was evidently no case against Mr. Angus, for it was proved that during the whole period of Miss Burns's sickness the door of her chamber was open, anybody could have access to it, that no sounds of pain were heard, no cries of any description, no dead child was found on the premises, no signs of childbirth were visible, and that Mr. Angus had never quitted the house for a minute while his sister-in-law was lying ill. It was conclusively proved that Miss Burns's death was attributable to internal disease, under which she had suddenly sunk. A verdict of "Not guilty" was recorded. After the trial a hot controversy arose on the medical features of the case, in which Dr. Carson took a prominent part. His evidence at the trial completely upset the testimony of the adverse witnesses, especially that of his medical brethren. Dr. Carson wrote an admirable and masterly vindication of his own evidence, which had been attacked. He hit his opponents heavily. It was endeavoured to show that Miss Burns's death arose from an attempt to procure abortion. Mr. Angus frequently declared that he loved and respected Miss Burns too well to do her any harm. The case created immense excitement at the time, not only in Liverpool, but throughout the kingdom, especially amongst the medical profession.

Gleave-street, Everton, takes its name from Dr. Gleave, an Everton physician. On the south of Gleave-street stood the once-famous "Half Way House," which, having been converted into a cake-shop after it lost its licence, was purchased by Dr. Gleave, who erected a mansion on it. The garden adjoined the residence of the Rev. Archdeacon Brooks, senior rector of Liverpool, who, on being asked whether the necropolis which adjoined his garden was not detrimental to his health and comfort, replied "No; he had always found the inhabitants very quiet neighbours."

Some curious entries occur in the town records of Everton, as, for instance, "Paid Dr. Livesley for setting Alice Knowles' leg, 42*s*."; "Paid for a coffin for Witch Nancy's child, 1*s*. 6*d*." The little Baptists' burying-ground, now covered by the Fabius Chapel, in Everton-road, is named after "Dr." Fabius, who, about the year 1698, was a pious young apothecary named Bean, living in Low-hill. He Latinised his name to Fabius from Faber. His family gave the cemetery to the Baptists "for ever" in 1707, and "Dr. Fabius" himself was laid to rest therein, the inscription on his tombstone being: "In this dormitory reposeth the body of Daniel Fabeus, who departed this life ye 12 April, 1718, aged 37."

"A singular physiological problem kept the Liverpool public on the *qui vive* during the autumn of 1817," says Picton in his "Memorials of Liverpool." "A Miss M'Avoy, a young lady residing in St. Paul's-square, about seventeen years of age, was attacked by hydrocephalus and partial paralysis. Her eyes were affected by gutta serena, and she was pronounced by her medical attendants to be entirely blind. Shortly afterwards she was reported to possess the faculty of reading print and distinguishing colours by the touch, her eyes being so completely bandaged as to prevent the possibility of deception. The story got wind, and the house in St. Paul's-square became a centre of attraction to the wonder-loving public. There could be no mercenary object to gain by imposture, as the family were respectable and no money was ever received. Many wonderful accounts were published of

her capacity of deciphering the smallest print and the most delicate colours in utter darkness as well as with the eyes covered. Dr. Renwick, a physician of eminence published a pamphet, in which he gave explicit credence to the new and supernatural faculty. Encouraged in this way, her pretensions assumed a higher flight. She now claimed the faculty of discerning objects at a distance by placing her fingers behind her upon the glass of the windows and was said in this way to have described the figures of persons in the churchyard opposite and the colour of their clothes. This naturally excited some suspicion, which was strengthened by other circumstances. The interposition of any substance between her face and hands deprived her of the faculty of seeing as it were by touch. This she attributed to the necessity for her breath having free and uninterrupted communication with her hands. To obviate this difficulty an ingenious gentleman (Mr. Egerton Smith) contrived a mask which whilst entirely covering the eyes and face, left the breathing free and uninterrupted, and offered to pay twenty guineas, which another gentleman doubled, if Miss M'Avoy, with this mask on, could read a single line of moderately sized print. After some equivocation the test was declined, and Miss M'Avoy's pretensions fell to zero and were soon forgotten. There is nothing new under the sun. The brothers Davenport of more recent days and the modern spiritualists with their mediums are uniformly found to fail when, as in this instance, brought to the crucial test of practical experiment and common sense."

Among the items in the accounts of Mr. Churchwarden Dennison of Liverpool for the year 1818 were £32 15*s.* 6*d.* for mourning and scarves for the parish officers attending the funeral of the parish practitioner and £11 0*s.* 6*d.* for six gold-laced hats for the constables. He was an ideal churchwarden from a workhouse point of view, his hospitality (at the parish expense) being almost unbounded. There were weekly dinners at the workhouse on Tuesdays, to which his friends were very freely invited. Sixteen dozen of port at 65*s.*, £70 worth of Vidonia, and sixteen gallons of rum had thus been consumed in the year, besides brandy, jellies, and lemons; 200 gallons of wine were given to the clergy for their private use. £1416 were paid for wine, spirits, and malt liquor within the year; and yet this liberal soul, who displayed such respect for the parish doctor, clergy, and his own friends, had his generous outlay disallowed by the quarter sessions, and in the end had to pay about £2000 for his short but glorious reign as churchwarden.

In a list of the officers who commanded the several regiments or companies raised in Liverpool for the defence of the country during the threatened invasion in 1803 are found the names of Joseph Brandreth, gentleman, who was surgeon, and James Dawson, gentleman, who was assistant surgeon, in the 1st Battalion of Liverpool Volunteers, raised at the expense of and commanded by Lieutenant-Colonel Bolton; Henry Parke, gentleman, was surgeon in the Liverpool Volunteer Artillery, commanded by Peter Whitfield Brancker; and George Catlow was surgeon of the Liverpool Independent Rifle Corps.

Dr. Peter Crompton, of Eaton House, was one of the prominent reformers and political orators of Liverpool. He came of an old Lancashire family, of which a branch was settled in Derbyshire. At the election of 1820 the Whigs in Liverpool were sadly at a loss for a candidate. Eventually Dr. Crompton and Mr. Leyland were nominated against Mr. Canning and General Gascoyne, but the contest was hopeless from the first. At the close of a seven day's poll the numbers stood: Canning, 1635; Gascoyne, 1552; Crompton, 345; Leyland, 125. Dr. Crompton was one of the class preferred by Cæsar—

> "Let me have men about me that are fat,
> Sleek-headed men, and such as sleep o' nights."

His jolly, rotund person was the incarnation of good humour, while his proposer and principal supporter, Colonel Williams, was lean, wiry, and of sour temperament. It may be surmised that the merciless wit of Canning played like lightning around such a pair. The doctor was not long before he "put his foot in it." Speaking on the hustings after his nomination he said: "A rumour has been spread abroad that my opposition to the return of our late representatives is wholly vexatious. Fool, indeed, should I be to come forward and put myself to every inconvenience in a place where I live to such a purpose; and still greater fool to expose myself thereby to the severe censures of Mr. Canning whose exquisite wit and humour can turn into ridicule everything, both sacred and human. The impartial page of history informs us that Nero fiddled while Rome burned. Mr. Canning smiled when Colonel Williams flashed his crimes in his face." The Mayor, having requested the worthy doctor not to indulge in personalities, the candidate continued:—"I thank you, Mr. Mayor, for the offer of your protection, but I fear not the face of man. I was observing, when I was interrupted, that while Rome fiddled Nero burned. (Laughter). I meant to say, that while Rome burned Nero fiddled. But I cannot smile amidst the ruins of my country, &c., &c." To this Mr. Canning replied at the close of his speech as follows:—"The honourable doctor, indeed, has tempted me somewhat high with his references to ancient history—with his allusion to the conflagration of Rome and to the Emperor Nero's musical accomplishments. Of that allusion I have not, to this moment, made out the application; but if he intended (which seems the most probable solution of it) to compare the honourable colonel's eloquence to a conflagration, and his own to a musical instrument, I have only to hope that if I offended by smiling at the colonel's fire, I may have made atonement by looking grave at the doctor's fiddling." Dr. Crompton was partner in a brewery. This, and the fact that his nomination had been decided by one of the five brothers Harvey, two of whom were brewers, gave point to the following squib:—

> "And when the doctor's sour ale's done—
> Ah! Cunning Doctor!
> He will laugh at his foes who have made his tap run,
> And the Harveys will join in the excellent fun,
> With their brewing, mixing
> Nutgall and treacle—
> Ah! Cunning Doctor!"

Dr. Crompton died Jan. 23rd, 1833, aged sixty-eight, leaving five sons and three daughters. Charles, the second son, was raised to the Bench as one of the puisne Justices of the Common Pleas. One of his daughters married the Rev. Llewellyn Davies, formerly Rector of Christ Church, Marylebone, another married Mr. R. Hutton, some time M. P. for Dublin. According to the Rev James Aspinall, M.A., who knew him, Dr. Cromptom was "a fearless, outspoken man, English all over in his bearing." He was the author of "A Letter to Robert Townley Parker, Esq., High Sheriff of the County Palatine of Lancaster," published in 1817.

During the progress of the election it had been announced that Colonel Williams was to stand for the representation of the county, to be proposed by Dr. Crompton. In his closing speech, after his election and chairing, Mr. Canning thus alludes to the circumstance: "It was surely no small presumption, especially on the part of those who are continually declaiming against the undue interference of powerful individuals and against the servile surrender of the freedom of election, it was no small presumption, I say, for any such party to think that they might with one hand grasp the representation of Liverpool and with the other indicate the representative of the county. Gentlemen, the process by which this twofold operation was to be brought about was one of a curious kind. It reminds me of what I have read in some of the political pamphlets of, I believe, the reign of Queen Anne, of an empiric who, not liking to sound his own praises but wishing to have them sounded, hit upon a notable expedient of obtaining the benefit without incurring the reproach of such a proclamation. A youth preceded him in the crowd crying with a loud voice, 'My father cures all sorts of diseases.' The doctor marched behind him with a sedate and solemn step, simply declaring, 'The youth says true.' Now, Colonel Williams appears to have acted on our hustings the part of the ingenuous youth when he proposed Dr. Crompton to you as a healer of all the diseases of the political Constitution. Dr. Crompton followed with a modest and measured pace, not singing his own praises, but admitting the truth of the praises which had been sung. But one good turn deserves another, and the operation in hand was, as I have described it, twofold. The peculiar inducement held out to you to receive Dr. Crompton as your representative was, that he was in possession of some great specific which would enable him to restore peace to the community and to heal the differences by which the nation is unfortunately distracted. What this panacea was we could never extract from the doctor on the hustings. Thus much only could we learn, that it was some cabalistic name which he was to pronounce upon the hustings at Lancaster which would still the popular storm and diffuse

liberty and contentment throughout the country. Well, when the time arrived, and Dr. Crompton departed for Lancaster, we found that the scene exhibited a few days before at Liverpool was to be acted over again at the county town, with a change only in the order of the *dramatis personæ*. Dr. Crompton was now to be the herald of the praises of his proposer; and the name of Williams, pronounced in the shire-hall, was the charm by which the county was to be lulled into peace and exalted into glory. Colonel Williams's election for the county was the prescription by which all diseases were to be healed. Pity that the county should reject the dose; but natural enough that after that rejection, you should upon his return to you reject the doctor."

This was not the first time that Canning's wit had been pointed with medical similes. In his youth he had lampooned Lord Sidmouth (then Mr. Addington), who commonly went under the sobriquet of "the Doctor," in the following parody:—

> "My name's the Doctor; on the Berkshire hills
> My father purged his patients—a wise man,
> Whose constant care was to increase his store,
> And keep his eldest son—myself—at home.
> But I had heard of politics, and longed
> To sit within the Commons House, and get
> A place; and luck gave what my sire denied.
> Some thirteen years ago, or ere my fingers
> Had learned to mix a potion, or to bleed,
> I flatter'd Pitt; I cringed, and sneaked, and fawned,
> And thus became the Speaker. I alone,
> With pompous gait, and peruke full of wisdom,
> Th' unruly members could control, or call
> The House to order.
> Tir'd of the Chair, I sought a bolder flight,
> And grasping at his power, I struck my friend,
> Who held that place that now I've made my own.
> Proud of my triumph, I disdained to court
> The Patron hand which fed me—or to seem
> Grateful to him who raised me into notice.
> And when the King had called his Parliament,
> To meet him here convened in Westminster,
> With all my family crowding at my heels,
> My brothers, cousins, followers, and my son,
> I showed myself *Prime Doctor* to the country.
> My end's attained, my only aim has been
> To keep my place—and gild my humble name."

Opposite the top of St. John's-lane there was at one time a capacious stall for the sale of herbs and quack medicines, the proprietors of which were Messrs. Startup and Brown, one of whom sold the drugs, while the other, dressed in a "mortar-board" cap and a stuff gown, delivered short lectures to the gaping crowds which assembled in front of the stall on the *medicamina artis*.

In 1826 a horrible disclosure took place connected with Hope-street, Liverpool, that filled the minds of the people with horror. One morning in October three barrels were carted to the pier and shipped on board the Glasgow packet as "salted hides." The captain of the packet and some of the passengers soon noticed that a disagreeable odour prevailed in the vicinity of these casks and then, as the novelists say, "a strange thing happened." The passengers, insisting upon the barrels being put on shore, in the act of doing so one of them burst open, when a human body was found closely packed in it in salt. In the other two were similar "salted hides." The carter who conveyed them to the vessel having been discovered the police were communicated with, by whom it was found that the barrels had been brought from a house in Hope-street, which on being searched was found to contain no less than thirty-three other corpses regularly salted and cured. The bodies had been taken from the parish cemetery in Cambridge-street. These subjects had been obtained for the use of medical schools, with which, it appeared, a regular trade was carried on.

One of the houses which now forms part of the East Dispensary, in Richmond-row, Liverpool, was once the scene of a laughable incident. The late Robert Crompton, watchmaker, poet, and journalist, happened to be passing one day when he heard groans and uncharitable sounds issuing from the house in question. He turned in to investigate the cause and to render assistance, if necessary. To his surprise he found an immense canvas lying on the floor, or rather tossing upon it like a vessel in distress on the angry sea, and sounds of blasphemy came up as it were from some Jonah down below. On raising the canvas, he discovered the late William Daniels, a famous local artist, lying on the floor in a very inartistic and anti-temperance condition, but able to swear most fluently. Daniels, a man of fine thirst, had been painting a large picture of Shylock, and, of course, solacing himself as usual with the flowing bowl. Then Shylock, acting up to his mean and vindictive record, had taken advantage of the artist's condition and fallen upon him, so that he was unable to rise or extricate himself without assistance.

De Quincey, the opium-eater, lodged for some time in Everton-terrace, in a little cottage to which access was obtained through a wicket and by two stone steps. During his stay in Liverpool he was in some way connected with the firm of Meritt and Wright, booksellers, Castle-street, who published in 1769 a book entitled "Liverpool Testimonial to the Departed Genius of Robert Burns, the Scottish Bard." The name of Dr. Currie (who published, according to Charles Lamb, a very silly biography of the poet) is amongst the subscribers, and Dr. Solomon and Dr. McCartney have their names down for different sums. The list of subscribers to the work is introduced by the following paragraph: "We whose names are hereunto subscribed, calling to mind the delight we have received from the immortal works of this great but unfortunate genius, offer the sums affixed after our names towards the support of his family, as a proof of the sympathy we feel in the affliction of the living, and of the honour we pay to the memory of the dead." Dr. McCartney was a celebrated Roman Catholic physician who had a large practice in Liverpool. He resided in Mount Pleasant, a thoroughfare made famous as the birthplace of William Roscoe. Dr. McCartney's house was afterwards occupied by Mr. James Dawson, who, on giving up practice, went to reside at Wray Castle, by Windermere Lake. Mr. Dawson was President of the Medical Institution in 1847, and one of the consulting surgeons to the infirmary.

At 115, Mount Pleasant resided Mr. Hugh Neill, the originator of the Eye and Ear Infirmary, then located in Harford-street, Mount Pleasant.

Dr. George Churchill Watson, of 4, Bedford-street North, a physician who practised in Liverpool about half a century ago, was the writer of some admirable letters on sanitary reform in the *Liverpool Standard*. These letters, signed "Medicus," were, in fact, the pioneers of that great movement in that town. The eccentric Joseph Williamson, who had a mania for excavations, and whose tremendous underground works at Edge Hill were declared by Robert Stevenson to be marvels of construction, once, through the intercession of one of his tenants, gave an order to inspect his works to Dr. Watson. The order ran thus: "Dr. Watson is not to be interrupted in his walks on my premises, either on the surface or under the surface. J. W., E. H. January, 1839." Dr. Watson's account of the works when they were in their prime was that they were perfect marvels, not only for their great extent but for the excellence of their construction and their inapplicability to any possible purpose. It was no small honour to be allowed to see these extraordinary works, as Williamson seemed jealous that other people should be gratified by a sight of them. It has been conjectured that he spent at least £100,000 upon them. When the tunnel was in formation from Edge Hill to Lime-street about 1834, and was passing through and under his property, Mr. Williamson actually drove a tunnel under the railway tunnel, appearing himself in the aperture made, to the amazement of the navvies, who were told that if "they wanted to know how to tunnel he could give them a lesson in that polite art."

THE PRINCE OF WALES AT GUY'S HOSPITAL.

THE OPENING OF THE NEW SCHOOL BUILDINGS.

ON Wednesday afternoon last H.R.H. the Prince of Wales, accompanied by the Duke of Cambridge, attended at Guy's Hospital to open the new medical school buildings, which have been erected at the cost of the staff of the school, and have entailed an expense of £12,000. The present buildings, moreover, are only an instalment, as it is contemplated to rebuild the whole medical school, for which purpose it is estimated that a further sum of £35,000 will be required. The buildings now opened provide an admirably arranged lecture theatre, together with two large laboratories for practical instruction in histology and physiological chemistry.

The Prince of Wales on arrival was received by Mr. Cosmo Bonsor, M.P., the treasurer of the hospital, and Dr. Perry,

the superintendent of the medical school, and proceeded to the board-room, where he presided over a short meeting of the general court. After the members of the medical and surgical staff had been presented to His Royal Highness a financial statement was made by Mr. Bonsor showing that the total sum received up to this date in answer to the Prince's appeal for a re-endowment fund of the hospital had amounted to £194,000.

An address of welcome was then read by Mr. Howse, the senior surgeon, when the Prince proceeded to the hospital, where Dr. Pye-Smith, the senior physician, described the objects of the building and asked his Royal Highness to declare the building open. After referring to the position of the voluntary hospitals in England, and the development during the present century of the influence of the medical schools and scientific teaching, Dr. Pye-Smith went on to point out how their development must be assisted by corresponding increase of facilities for study. But the school and the hospital were separate institutions, and the school could not, of course, obtain any of the money subscribed for the hospital. In the absence of Government grants or private beneficence the staff had, therefore, only one resource to maintain their school at the proper level, and this was to find the money for themselves.

The Prince of Wales then declared the building open, and delivered a short address in which he spoke of the immense services to the community that were performed by laboratories in which the laws of life were investigated. He spoke of the heritage which the Guy's student had in the examples of such men as Astley Cooper, Bright, Addison, Hodgkin, and Gull, and laid particular stress upon the gentle and humane spirit which, not confined to any one school, is the best possession of the medical faculty. He stated, amidst cheers, that after careful inquiry he had satisfied himself *that whenever experiments upon animals were performed in the school of Guy's Hospital they were undertaken with the object of promoting advances in medicine or surgery which are likely to be of benefit to suffering humanity, and that such experiments were conducted under strict supervision by highly qualified investigators, while in practice the only operations performed upon animals not in a condition of complete anæsthesia were inoculations and hypodermic injections.* Finally, addressing the students, he exhorted them to take care that "the great profession to which you aspire to belong shall, when you leave it, stand as high in the service and in the affection of the public as it does at the present time."

The Prince of Wales's words were received, as might be expected, with the utmost enthusiasm, and all references in the speech of Dr. Pye-Smith to the aid that he had given to the endowment fund by placing himself at its head were loudly cheered, as were allusions to the Jubilee Fund for London Hospitals. Afterwards His Royal Highness re-named one of the wards, which has just been re-opened, "the Queen Victoria Ward." Subsequently tea was served to the visitors, who must have numbered over 2000, and at the end of the afternoon the prizes and medals were distributed to the successful students in the medical school by Mrs. Cosmo Bonsor.

BANQUET TO LORD LISTER BY HIS FORMER HOUSE SURGEONS AND DRESSERS.

AMONG all the manifestations of the profound satisfaction felt by every member of the medical profession at the recognition of the work of Joseph Lister shown by his elevation to the peerage by Her Majesty, none can have given such pleasure to himself as the unique gathering of thirty of his old house surgeons and over a hundred of his old dressers, who assembled on Wednesday, May 26th, at a banquet in his honour at the Café Royal. It is said that no man is a hero to his valet; it is certain that no man is surrounded by more candid and acute critics in the shape of house surgeons and dressers than a surgeon in a teaching school, and to secure and retain the affection, as well as the unqualified admiration, of those who have been most intimately associated with him is the happiest lot that can befall any man who has strenuously tried not only to advance his art, but to inspire those who shall come after him with high aims and with correct principles for practice. The gathering on Wednesday proved that Lord Lister had succeeded in both these directions. It is unnecessary to repeat what has so often been said of the far-reaching effects in saving life and diminishing suffering that have resulted from the application of Listerian principles to the every-day practice of surgery. But the speeches showed how successful he had been in exerting on his pupils a personal influence in setting before them a high ideal, insisting on minute conscientious care and humane consideration in the management of every case that was intrusted to their care. The result of his teaching was shown by the eminence to which many of those present had already arrived. Among the old pupils who had assembled to entertain him were Professor Coats, Dr. Sims Woodhead, Mr. Watson Cheyne, Mr. Francis Caird, Dr. Dundas Grant, Dr. Beatson, Sir Hugh Beevor, Dr. T. F. Chavasse, Dr. G. A. Gibson, Dr. D. Burgh Birch, Dr. Heron, Mr. Cheatle, and Dr. St. Clair Thomson.

The usual loyal toasts having been duly honoured Dr. Hector Cameron proposed the toast of "The Army, Navy, and Reserve Forces," referring particularly to the death of Surgeon Fyfe, R.N., in the Benin Expedition, who was shot through the heart while giving assistance to a wounded comrade, "dying the death of a soldier while doing the work of a surgeon," and the toast was responded to by Surgeon Thorpe, R.N., and Brigade-Surgeon-Lieutenant-Colonel Allin.

Dr. Hamilton Ramsay, as the oldest living house surgeon to Lord Lister, then presented the following address:—

To the Right Honourable Lord Lister, Surgeon Extraordinary to the Queen, Emeritus Professor of Clinical Surgery at King's College, London; late Regius Professor of Clinical Surgery in the University of Glasgow, and Regius Professor of Clinical Surgery in the University of Edinburgh.

MY LORD,—We have had the great honour and privilege of serving under your Lordship as House Surgeons, Clerks, or Dressers, and we beg leave to offer you on this occasion of your elevation to the peerage our affectionate and respectful congratulations. This memorable year of a memorable reign will to all of us be ever associated with the public recognition of your splendid work.

To you, our revered master, we can never adequately express our indebtedness for all you have taught us and for the example you have been to us. We beg leave to hand you the list of those who have had the honour of being intimately associated with your Lordship in the great work by which you have made possible the triumphs of modern surgery, and on behalf of those who have been prevented from joining us this evening we beg to subscribe ourselves your very grateful and affectionate pupils.

Signed by { JOSEPH COATS, Chairman, ST. CLAIR THOMSON, Honorary Secretary, and all the company present.

Lord Lister, in responding, spoke of the intense gratification which this spontaneous demonstration of his old pupils had given him and said that he was specially glad that the album, which he should prize highly, should have been presented by Dr. Ramsay, who was not only one of his first house surgeons, but had previously been a student of his in the extra-mural school of Edinburgh, and mentioned that Dr. Ramsay was first attracted to the study of medicine from charitably attending cases of cholera during an epidemic in a mining district.

Mr. London, an old King's College student, presented an address from the medical practitioners of British Guiana, which was suitably acknowledged.

Professor Coats, in proposing the toast of the evening in an admirable speech, said that they had not only to congratulate Lord Lister on his elevation to the peerage, but on the world-wide acceptance of the principles of antiseptic surgery which he had laid down. Even before Lord Lister had introduced antiseptic methods into surgery he had by his physiological and pathological work shown extraordinary capacity, as those who had worked with him at Glasgow would well remember. People often spoke of Listerian antiseptics as if various forms of apparatus, instead of certain fundamental principles, were the essentials. Lord Lister, however, while adhering inflexibly to the principles, had always been ready to adopt new methods or to discard apparatus if he thought that asepsis could be as well or better secured by so doing, and the system had not only survived, but had been triumphant, modifying the whole modern practice of surgery. But, above all, it was the personal charm of Lord Lister which endeared him to those who worked under him, his high ideals of work, his humanity to his patients, and his gentle consideration for his juniors.

Lord Lister, in rising to reply, was greeted with long-continued cheering, and was evidently much moved by the

warmth of his reception. He said he was touched profoundly to find that the affectionate loyalty which those who had worked under him had always shown him should have persisted for so long a time. The kind words which had been said and the way in which they had been received would always remain with him as indications that his labours had not been altogether in vain.

Dr. St. Clair Thomson said that he had received "hundreds" of letters from old pupils who were unable to attend. One of them (Dr. Aikman, of Guernsey) had sent the flowers with which the room was decorated.

A pleasant incident, showing that the feeling of the present generation is no whit behind that of their predecessors, was the receipt of a telegram from the house surgeons and house physicians of the Edinburgh Royal Infirmary conveying their congratulations.

The committee and Dr. Elder and Dr. St. Clair Thomson (the honorary secretaries) are to be congratulated on the success of this banquet, which will never be forgotten by those who were fortunate enough to be present.

THE FIRST ANNUAL DINNER OF THE INDIAN MEDICAL SERVICE.

THURSDAY, May 20th, saw the inauguration of a new and highly interesting medical dinner at the Café Monico, when the members past and present of the Indian Medical Staff dined together for the first time. The chair was taken by the man who was marked out at once by every imaginable claim for the post, Sir Joseph Fayrer, and he was supported by the Secretary of State for India, Lord George Hamilton. The occasion was in every way successful. Upwards of seventy gentlemen sat down to dinner, among whom we may mention Sir Trevor Lawrence, Sir Joseph Ewart, Dr. Playfair, Surgeon-Generals W. R. Rice, C.S.I., J. Cuningham, C.S.I., P. W. Sutherland, De Renzy, Hooper, and Colvin Smith; Deputy-Surgeon-Generals Kilkelly, McKellar, Farquhar, Raddock, and Cayley; Surgeon-Colonels Costello, Porter, G. S. Sutherland, Richardson, Roberts, Riddell, Harris, and Cates; Surgeon-Lieutenant-Colonels Holmes, Massy, Bate, Lyon, C.I.E., Eyre, Baker, Scully, Wright, Reid, Williams, Skardon, Griffiths, and Freyer (hon. sec.); Brigade-Surgeon-Lieutenant-Colonels Aitchison, Johnson, and Macleod; and Surgeon-Major Sir G. S. Robertson, K.C.S.I.; and the following guests: Lord George Hamilton, Sir William MacCormac, President of the Royal College of Surgeons of England, Sir J. Dick, K.C.B., Director-General, R.N., Surgeon-General Jameson, Director-General of the Army Medical Staff, Dr. Dickinson, President of the Royal Medical and Chirurgical Society, Mr. Reginald Harrison, President of the Medical Society, Mr. Richmond Ritchie, and Dr. S. Squire Sprigge.

Sir Joseph Fayrer made an excellent chairman, and his speech in reply to the toast of the evening, proposed by Sir William MacCormac, was full of interest for all his hearers. He showed that the pride of the members of the Indian Medical Service in their department was justifiable, inasmuch as British rule over the brightest jewel of Her Majesty's Crown might without exaggeration be considered to have had its origin in certain concessions made by the Emperor of Delhi to Gabriel Broughton, surgeon of the East India Company's ship *Hopewell*. Sir Joseph Fayrer then went on to mention the names, and in some cases the exploits, of the great men, past and present, of the Indian Medical Service in the three important and widely varying sections into which their work falls, linking the names of Hamilton and MacNeil, Falconer and Cleghorn, Keegan and Freyer, Cayley and Robertson, and many others, into one chain of scientific, administrative, and military performance.

Lord George Hamilton responded for the guests in a sympathetic and thoughtful speech. Referring to the triple trouble of cholera, plague, and famine with which our Indian Empire has been sorely tried, he had words only of the highest praise for the officers of the Indian Medical Service, upon whom so much anxious and dangerous work has fallen in consequence. He referred with emphasis to the fearless and unselfish conduct that went hand in hand in the service with medical skill, and "brought down the house" by a statement that he considered a dispensary established on the way to Chitral to be of more efficacy in the maintenance of peace than a regiment of soldiers would be.

Surgeon-Lieutenant-Colonel Freyer, upon whom the organisation of the dinner devolved, is to be congratulated on the results of his efforts. A successful *réunion* was made doubly pleasant to all by the presence and the appreciative words of the Secretary of State for India.

HOSPITAL REFORM ASSOCIATION.

A MEETING of the Hospital Reform Association was held on Wednesday afternoon last in the Victoria Hotel, Manchester. The chair was occupied by Mr. Walter Whitehead, who explained the reasons of the society's existence. Mr. T. Garrett Horder, the secretary of the Association, mentioned that it had been said twenty-two years ago that, as far as Manchester and Salford were concerned, the oft-heard cry of the abuse of medical charities was a thing of the past. It was for them to say whether this was still true. From what he had gathered in looking over the returns of the Manchester medical charities he was disposed to say they were very much abused indeed, and that the present system of investigation did not really do much towards preventing the abuse.—The Chairman then moved: "That in the opinion of this meeting the time has arrived when an inquiry should be made into the mode of administering medical relief in the Manchester and Salford hospitals and dispensaries; and it is further of opinion that such an inquiry should be conducted by a committee which should be representative of all the interests concerned."—Dr. Worswick seconded the resolution.—After the resolution was adopted the following committee was appointed: Mr. Walter Whitehead, Mr. G. A. Wright, Mr. C. Behrens, Dr. Alexander Stuart, Dr. S. Woodcock, Dr. A. Godson, Mr. F. Scott, Dr. T. Harris, Dr. W. J. Sinclair, Dr. Lloyd Roberts, and Dr. Vipont Brown (hon. sec.).

The meeting ended with the customary complimens to the chairman.

Public Health and Poor Law.

LOCAL GOVERNMENT DEPARTMENT.

REPORTS OF INSPECTORS OF THE MEDICAL DEPARTMENT OF THE LOCAL GOVERNMENT BOARD.

Diphtheria at Hatley Cockayne.—The story told by Dr. G. S. Buchanan, as to diphtheria in the little village of Hatley Cockayne, in the Biggleswade rural district of Bedfordshire, is typical of an occurrence of that disease in rural areas. When investigation came to be made and obscure attacks could be interpreted in the light of subsequent events, it was found that sore-throat of an infectious character commenced in the village in June, 1896, but even when a fatal attack took place owing to laryngeal complications it was at first assumed that the malady which was being dealt with was a form of follicular tonsillitis. But suspicion being roused a more careful examination was made towards the end of July, and it was discovered that there were then eleven attacks of diphtheria. The village consisted of four detached houses, including the rectory and two outlying farms, and fifteen cottages. In all but one of these latter, in which there were children, diphtheria occurred, twenty-three attacks of sore-throat of differing degrees of severity taking place out of sixty-four residents in the cottages in question. A number of these cases were severe, in so far at least as sequelæ were concerned, some of the post-diphtherial paralysis being grave and even fatal. The beginnings of the disease seemed lost in the earlier mild and unrecognised attacks; but the diffusion of the malady was in large measure due to personal infection contracted during either work or play; and in this connexion it is noted that the day school and the Sunday school were both held in a single small room attached to one of the cottages. Unfortunately no isolation was attempted. It is stated that the hospital belonging to the rural district was being reserved for cases of enteric fever, which was at the time prevalent in the village of Moggerhanger. We hope

this does not mean that the hospital is so contrived that cases of only one disease can be admitted at the same time; all such isolation hospitals, however small, should be designed on the assumption that at least two diseases in both sexes may be expected at any time. The concluding portion of Dr. Buchanan's report deals with the question of the water-supply of the village of Moggerhanger and also of Chalton, in both of which enteric fever had occurred. The wells seem to be fed by surface water which percolates through layers of glacial drift overlying the Oxford clay. This latter formation is one which presents considerable difficulties in connexion with water-supply; but this is no excuse for surrounding wells sunk in a surface soil with privies, cesspools, &c., in such a manner as to foul that soil. Dr. Buchanan incidentally gives a warning against any trust being placed in the "cleansing" of such wells. Where the fault lies in the fact that the surface soil through which the water flows is fouled by filth it is difficult to conceive how any one of intelligence can place reliance on the scraping and lime-whiting of the brickwork with which the well is lined. The process savours a good deal of that which is known as whitening the sepulchre.

REPORTS OF MEDICAL OFFICERS OF HEALTH.

Folkestone Urban District.—Two separate outbreaks of enteric fever occurred in Folkestone during 1896 as the result of the pollution of milk outside the borough boundary. In one instance the outbreak was due to a contaminated water supply and in the second no direct evidence of contamination could be detected. Mr. Yunge-Bateman insists that these two outbreaks furnish an admirable illustration of the manner in which one district is at the mercy of another, and he points out that it is only when illness has actually occurred as the result of a contaminated milk supply that the operations of the Infectious Diseases Prevention Act can be brought into play. Mr. Yunge-Bateman considers that a town should have the same control over dairies situated outside the borough, and which supply the town with milk, as it has over dairies within its limits.

Bournemouth Urban District.—Mr. P. W. G. Nunn reports that during 1896 there occurred at Bournemouth a case of small-pox which he thinks was not improbably contracted from a Gloucester mail bag. The patient was accustomed to handle mail bags from the infected town, and his attack occurred at a time which was consistent with this view. Mr. Nunn brought the matter to the notice of the postal authorities, and steps were taken to guard against any further introduction of infection from the suspected quarter.

Crewe Urban District.—Mr. Herbert Jones reports that the death-rate among illegitimate children in Crewe was during 1896 slightly lower than among children born in wedlock—a fact which forms an interesting exception to the general rule of a high mortality amongst illegitimate offspring. Arrangements have been made by the Crewe sanitary authority for the bacteriological examination of suspicious cases of diphtheria, and it has been decided to pay the notification fee, whether the result of the examination be positive or negative. Infantile diarrhœa is, it appears, always high in Crewe, and Mr. Jones has ascertained that incidence of the disease is highest in a certain area largely supplied with cesspools and privies. We must congratulate Crewe upon having at last adopted the Notification Act, as we have on other occasions had to express our disapproval of the attitude of the Crewe town council in this particular. Mr. Jones is, we believe, leaving Crewe for a wider field of activity, and it must be gratifying to him to feel that his successor will find the district now provided with notification and with isolation accommodation.

Stoke Newington Sanitary District.—The corrected death-rate of this district for 1896 was the lowest of the districts in the metropolis, being but 13·3 per 1000, as compared with 13·4 for Hampstead, which was the next lowest on the list. In discussing the question of isolation accommodation in the metropolis Dr. H. Kenwood doubts whether the Metropolitan Asylums Board will ever be able to provide accommodation for periods of exceptional prevalence of the disease, and he remarks that a scheme which would provide for this would necessitate a very large number of beds and persons remaining idle for many months in the year. The vestry of Stoke Newington has, we note, decided to supply the medical practitioners of their district with diphtheria antitoxin at cost price, and we can well understand that this provision will be highly appreciated. Dr. Kenwood regards it as a great waste of public funds that such a large amount should be expended on the purification of London water, and that it should afterwards be used so largely for flushing purposes. He rightly considers that sea water should be supplied to London for flushing and other purposes.

Cannock Rural District.—Dr. William Hosegood suggests that as a means of reducing the high infantile mortality of the district the county council of Staffordshire might arrange for a house-to-house distribution of leaflets setting forth in plain language the proper way of feeding babies, and drawing attention to the harm which is likely to result from improper food. Doubtless this measure would do some good—that is, if the parents could be persuaded to read the leaflets. We presume, however, that Dr. Hosegood would advocate that visits should be made more especially to houses from which births had been registered, and that the distributor of the leaflets should be capable of demonstrating to the parents the principles inculcated in the leaflets.

VITAL STATISTICS.

HEALTH OF ENGLISH TOWNS.

In thirty-three of the largest English towns 6119 births and 3617 deaths were registered during the week ending May 22nd. The annual rate of mortality in these towns, which had declined in the four preceding weeks from 18·8 to 16·5 per 1000, rose again last week to 17·2. In London the rate was 15·4 per 1000, while it averaged 18·3 in the thirty-two provincial towns. The lowest death-rates in these towns were 12·9 in Croydon, 13·1 in Leicester and in Bradford, 13·7 in West Ham, and 14·0 in Swansea; the highest rates were 22·0 in Manchester, 22·1 in Burnley, 22·4 in Plymouth, and 23·3 in Liverpool. The 3617 deaths in these towns included 357 which were referred to the principal zymotic diseases, against 315 and 340 in the two preceding weeks; of these, 102 resulted from whooping-cough, 97 from measles, 43 from diarrhœa, 42 from diphtheria, 38 from scarlet fever, 34 from "fever" (principally enteric), and 1 from small-pox. No death from any of these diseases was recorded last week in Gateshead; in the other towns they caused the lowest death-rates in Derby, Preston, and Huddersfield, and the highest rates in Wolverhampton, Liverpool, Salford, and Burnley. The greatest mortality from measles occurred in Manchester, Salford, Liverpool, Bolton, and Burnley; from scarlet fever in Halifax; from whooping-cough in Salford, Oldham, Burnley, Plymouth, and Bristol; and from "fever" in Croydon. The 42 from deaths from diphtheria included 33 in London, 3 in Liverpool, and 2 in Cardiff. One fatal case of small-pox was registered in London, but not one in any other of the thirty-three towns. There were 13 cases of small-pox under treatment in the Metropolitan Asylum Hospitals on Saturday last, the 22nd inst., against 12, 11, and 14 at the end of the three preceding weeks; one new case was admitted during the week, against 6, 3, and 6 in the three preceding weeks. The number of scarlet fever patients in the Metropolitan Asylum Hospitals and in the London Fever Hospital at the end of the week was 2508, against 2380, 2385, and 2416 on the three preceding Saturdays; 311 new cases were admitted during the week, against 223, 231, and 239 in the three preceding weeks. The deaths referred to diseases of the respiratory organs in London, which had been 232 and 198 in the two preceding weeks, rose again last week to 220, but were 98 below the corrected average. The causes of 39, or 1·1 per cent., of the deaths in the thirty-three towns were not certified either by a registered medical practitioner or by a coroner. All the causes of death were duly certified in Portsmouth, Cardiff, Nottingham, Hull, and in thirteen other smaller towns; the largest proportions of uncertified deaths were registered in Salford, Preston, Sheffield, and Newcastle-upon-Tyne.

HEALTH OF SCOTCH TOWNS.

The annual rate of mortality in the eight Scotch towns, which had been 20·7 and 20·8 per 1000 in the two preceding weeks, further rose to 22·3 during the week ending May 22nd, and was 5·1 per 1000 above the mean rate during the same period in the thirty-three large English towns. The rates in the eight Scotch towns ranged from 14·4 in Greenock and 18·8 in Aberdeen to 25·2 in Paisley and 26·9 in Edinburgh. The 664 deaths in these towns included 49 which were referred to measles, 35 to

whooping-cough, 14 to diarrhœa, 5 to diphtheria, 4 to scarlet fever, and 3 to "fever." In all, 110 deaths resulted from these principal zymotic diseases, against 93 and 102 in the two preceding weeks. These 110 deaths were equal to an annual rate of 3·7 per 1000, which exceeded by 2·0 the mean rate last week from the same diseases in the thirty-three large English towns. The fatal cases of measles, which had been 29 and 41 in the two preceding weeks, further rose to 49 last week, and included 30 in Edinburgh, 15 in Glasgow, and 4 in Leith. The deaths referred to whooping-cough, which had declined in the three preceding weeks from 45 to 29, rose again to 35 last week, of which 16 occurred in Glasgow and 9 in Edinburgh. The 4 fatal cases of scarlet fever showed a decline of 2 from the number in the preceding week, and included 3 in Glasgow. The deaths from diphtheria, which had been 6 and 5 in the two preceding weeks, were again 5 last week, of which 2 occurred in Glasgow and 2 in Edinburgh. The deaths from diseases of the respiratory organs in these towns, which had been 134 and 108 in the two preceding weeks, rose again to 135 last week, and were 43 above the number in the corresponding period of last year. The causes of 39, or nearly 6 per cent., of the deaths in these eight towns last week were not certified.

HEALTH OF DUBLIN.

The death-rate in Dublin, which had been 33·7 and 28·3 per 1000 in the two preceding weeks, further declined to 27·3 during the week ending May 22nd. During the past seven weeks of the current quarter the death-rate in the city has averaged 31·1 per 1000, the rate during the same period being 16·4 in London and 26·5 in Edinburgh. The 183 deaths registered in Dublin during the week under notice showed a decline of 7 from the number in the preceding week, and included 15 which were referred to the principal zymotic diseases, against numbers declining from 41 to 19 in the four preceding weeks; of these, 6 resulted from whooping-cough, 5 from measles, 2 from diphtheria, 2 from "fever," but not one either from small-pox, measles, or diarrhœa. These 15 deaths were equal to an annual rate of 2·2 per 1000, the zymotic death-rate during the same period being 1·3 in London and 7·8 in Edinburgh. The fatal cases of whooping-cough, which had been 16 and 6 in the two preceding weeks, were again 6 last week. The deaths from measles, which had declined in the four preceding weeks from 19 to 6, further fell to 5 last week. The 2 deaths referred to "fever" corresponded with the number recorded in the preceding week, while the mortality from diphtheria showed an increase. The 183 deaths in Dublin last week included 38 of infants under one year of age and 38 of persons aged upwards of sixty years; the deaths of infants exceeded those recorded in the preceding week, while those of elderly persons showed a decline. Three inquest cases and 4 deaths from violence were registered; and 59, or nearly a third, of the deaths occurred in public institutions. The causes of 9, or nearly 5 per cent., of the deaths in the city last week were not certified.

THE SERVICES.

ARMY MEDICAL STAFF.

SURGEON-CAPTAIN HERBERT L. G. CHEVERS retires from the Service, receiving a gratuity. Brigade-Surgeon-Lieutenant-Colonel M. M. Gallwey has been appointed Recruiting and Embarking Medical Officer, Southern District at Portsmouth. Surgeon-Captain E. Corcoran has embarked for Sierra Leone, and Surgeon-Captain R. Holyoake for South Africa.

INDIA AND THE INDIAN MEDICAL SERVICES.

The services of Surgeon-Captain G. S. Thomson (Bombay) are placed temporarily at the disposal of the Government of Bombay for employment on plague duty. The services of Surgeon-Captain W. E. Hardy, A.M.S., are placed temporarily at the disposal of the Foreign Department for plague duty. Surgeon-Major Bull to be Staff-Surgeon, Poona, vice Surgeon-Lieutenant-Colonel Young, retired. 4th Bombay Rifles: Surgeon-Captain Bennett to the Medical Charge, viec Surgeon-Major Bull, transferred. Surgeon-Captain W. H. B. Robinson (Bengal), Medical Officer of the 34th Bengal Infantry, is appointed to officiate as Civil Surgeon of Bikanir, vice Surgeon-Major W. H. Neilson, and until further orders.

NAVAL MEDICAL SERVICE.

The following appointments are announced: — Fleet-Surgeons: Edward E. Mahon, C.B., to the *Excellent*; Herbert M. Ellis to the R.M. Artillery, Eastney; Michael Fitzgerald to the *Majestic*; and Anthony Gerham, M.D., to the *President*. Staff-Surgeons: Alexander J. J. Johnston to the *Victorious*, and John Acheson, M.D., to the *President*, additional, for R.N. Rendezvous.

YEOMANRY CAVALRY.

Lanarkshire: Surgeon-Captain R. E. Wood to be Surgeon-Major.

VOLUNTEER CORPS.

Artillery: 1st Worcestershire and Warwickshire: Surgeon-Captain D. Rice resigns his commission. *Rifle:* 1st Volunteer Battalion the Buffs (East Kent Regiment): Surgeon-Lieutenant A. Murdoch resigns his commission.

Consequent upon the division of the 2nd Volunteer Battalion the Royal Welsh Fusiliers into two Battalions, designated respectively the 2nd Volunteer Battalion the Royal Welsh Fusiliers and the 3rd Volunteer Battalion the Royal Welsh Fusiliers, Her Majesty has been graciously pleased to approve of the following transfers of officers from the 2nd Volunteer Battalion to the 3rd, and are considered to have received in the new Battalion commissions of the same rank and date as those previously held by them in the 2nd Volunteer Battalions, viz.:—R. A. Prichard, Surgeon-Captain; W. J. Morris, Surgeon-Captain; T. E. Jones, Surgeon-Captain; T. L. K. Davies, Surgeon-Captain; and E. T. Hughes, Surgeon-Lieutenant.

THE ROYAL MILITARY TOURNAMENT.

The Royal Military Tournament, which was opened by the Prince of Wales on Thursday, May 27th, must be this, the eighteenth year, looked upon as an unqualified success from almost every point of view. As a spectacular entertainment the organisers of the Tournament are certainly to be congratulated, and the audience have no cause to grumble at the quantity and quality of spectacle provided. The pageant, "Our Army, 1704—1882," is representative of the growth and progress of the British standing army from early times up to the present day, and is commemorative of the four renowned victories of Blenheim, Waterloo, Inkerman, and Tel-el-Kebir. The display by the New South Wales Rifles will no doubt prove popular with the public, as will also the military cycling display by members of the 26th Middlesex (Cyclist) R.V. The latter display is distinctly good, but we think that it shows the use of the cycle in warfare as seen at the Agricultural Hall rather than on the actual battle-field. "Throwing the djerid" by the Zaptiehs, or Cyprus Military Police, and the war dance by the Aboriginal inhabitants of Borneo, the Dyaks, are interesting performances, but might, we think, be curtailed with advantage. The musical drive by the Royal Horse Artillery and the naval display form not the least noteworthy items on the programme, and the musical double ride—which will be given during the first week of the Tournament by the 3rd (Prince of Wales's) Dragoon Guards—continues to receive the applause which it so rightly deserves. The display by the Army Gymnastic Staff, of which we hope to say a word later, does great credit to those who have had charge of their training. The usual competitions will take place of course from day to day, and the combined display of all arms closes each performance. A most desirable improvement in this display is the comparative absence of the deafening noise of the machine guns and also of the smell of burnt powder which characterised previous performances.

The principal medical officer in charge of the Tournament is Surgeon-Major A. C. A. Alexander (Coldstream Guards), who is assisted by Surgeon-Major J. E. R. James, A.M.S.

THE GORDON BOYS' HOME.

The late General Charles Gordon may be said to have been the central figure of chivalry, purity of motive, and unselfish devotion to duty of his age. His death at Khartoum, on Jan. 26th, 1885, caused a feeling of deep regret in this and other countries, and it was a good idea to start as a memorial to him a home for the training and education of necessitous lads to fit them for service in the army and navy or for earning a livelihood in trade. Since the institution was started

865 boys have passed through it, 344 of whom have joined the army, navy, and colonial forces, and 241 have been provided with civil employment. These boys have almost universally turned out well, according to the characters that have been received of them. The education at the home is of a most practical character and well fitted to make them useful, law-abiding citizens. Officers of the public medical services will be glad to have learned recently from the Duke of York that in this Jubilee year of Her Majesty's sixty years' reign the Home is making progress. It is an institution that well deserves support, and it fulfils a very useful purpose and one that Gordon had most sincerely at heart.

THE BENIN DESPATCHES.

Despatches from Admiral Rawson, Consul-General Moor, and others were published in the *London Gazette* of the 7th inst. Among the officers mentioned and specially commended by Admiral Rawson are the following: Fleet-Surgeon M. Fitzgerald, for having organised the medical department and rendered every assistance. Staff-Surgeons E. R. Dimsey, of the *Phœbe*, and J. McC. Martin, of the *Forte*, were with the flying column, and upon them fell the whole work of attending the wounded and bringing them down. Surgeon R. T. A. Levinge, of the *Alecto*, is specially mentioned in Captain MacGill's despatch. Surgeon C. S. Facey, of the *Widgeon*, is mentioned in Captain O'Callaghan's despatch. Surgeon F. H. A. Clayton, of the *St. George*, although ill himself, worked most assiduously with the sick. Dr. R. D'Arcy Irvine, of the Niger Coast Protectorate, volunteered for, and was attached to, the Sapoba force; he was also most assiduous in his attention to the sick at Warrigi when there was no naval medical officer present.

MOBILISATION OF NO. 5 FIELD HOSPITAL.

The *Irish Times* of the 21st inst. gives an account of the recent mobilisation of this field hospital at Island Bridge Barracks on the 19th inst. under the command of Surgeon-Lieutenant-Colonel Greene. Major-General Viscount Frankfort, in the absence of Lord Roberts, accompanied by several staff officers and Surgeon-Major-General Preston, Principal Medical Officer of Ireland, inspected the hospital, and expressed his warm approval of the highly satisfactory manner in which every detail was carried out. A hospital was prepared for the accommodation of 100 sick, with all necessary arrangements, in a very short space of time. The *personnel* of a field hospital consists of four medical officers, one quarter-master, one warrant officer, and thirty-nine non-commissioned officers and men. Provision is made for 100 sick, the Army Service Corps finding the waggons, &c., necessary for transport.

THE BENIN EXPEDITION AWARDS.

The Queen has given directions for the following appointment to the Most Distinguished Order of Saint Michael and Saint George in recognition of services rendered in connexion with the recent expedition to Benin:—To be Ordinary Member of the Third Class or Companion of the Most Distinguished Order: Fleet-Surgeon Michael Fitzgerald, Royal Navy. Her Majesty has also given orders for the following appointments to the Distinguished Service Order in recognition of the services of the undermentioned officers during the same expedition:—To be Companions of the Distinguished Service Order: Staff-Surgeon James McCardie Martin, Royal Navy; and Staff-Surgeon Edgar Ralph Dimsey, Royal Navy.

THE LATE GRECO-TURKISH WAR.

According to the accounts which have appeared as to the medical arrangements of the Greek Army these do not appear to have been at all satisfactory. There seems to have been an absence of organisation, and the sufferings of the sick and wounded, owing to the want of proper care, are stated to have been considerable. Owing to the heavy rainfall to which the army was exposed at Domoko there was a large amount of sickness and the hospitals are crowded.

BELGAUM.

We learn by the last mail from India that cholera has been very prevalent of late in the villages to the south-east and south-west of Belgaum, and that several cases have occurred in that city and the Sudder bazaar. There were also two fatal cases in the East Yorkshire Regiment at that station.

Two new companies (Berkshire and Kent) have been added to the Militia Medical Staff Corps. For commissions in these companies immediate application should be made to the officer commanding Militia Medical Staff Corps, Aldershot.

Correspondence.

"Audi alteram partem."

THE CALOMEL BATH.

To the Editors of THE LANCET.

SIRS,—The first experiments with regard to the action of the calomel bath were made in a small room, the air of which necessarily became impregnated with the vapour. The result was that the action on the gums was quickly produced, and ten grains of calomel was generally sufficient to produce the required effect. In an ordinary room a drachm may be used to begin with. It is well that the calomel should be pure and not contain any free hydrochloric acid, which if breathed is apt to irritate the lungs. The presence of acid is readily ascertained by holding a piece of moistened litmus paper over the fumes. Messrs. Allen and Hanbury informed me that they kept the pure calomel. Mr. Lowe of Stafford-street was in the habit of having the calomel resublimed in order to get rid of any free acid which ordinary calomel generally contains. Mr. Lowe has also a box for administration of the calomel bath; with this apparatus very little of the calomel is breathed. The principal advantages of the administration of mercury by the calomel bath over some other modes of giving it are (1) it is clean and requires little exertion on the part of the patient, and (2) it does not irritate the digestive organs; but (3) by far the most important point is that it determines any action that may be taking place to the skin, and thereby prevents the affection of the internal organs. I can scarcely recall a case in which the treatment was commenced by the calomel bath and properly carried out in which the deeper structures were affected. In one case a patient, who had previously undergone a variety of treatment and had a hole in his hard palate before he commenced the treatment, did not recover. In this case nearly the whole of the outer table of the frontal bone perished. The calomel bath has no influence upon the local or suppurating sore. With cleanliness this will heal without any specific treatment.

In the House of Lords recently Lord Lister mentioned that there was one matter which he did not like in the Act of 1866—viz., that when a woman was pronounced to be clear of disease she received a certificate which she was to carry about with her. This could be no real protection to others. It is true that after a patient has been affected with constitutional syphilis he is much less likely to take the disease again; but this does not apply to the local form of the disease—a patient supposed to be cured one day may be re-infected the next.

I am, Sirs, your obedient servant,

HENRY LEE.

Queensborough-terrace, Hyde-park, W., May 19th, 1897.

"THE QUESTION OF THE SECOND OVARY IN OVARIOTOMY."

To the Editors of THE LANCET.

SIRS,—The diverse opinions expressed by the various writers on this question show how important it is to discuss temperately and without personal bias methods of procedure that may require re-consideration if performed under new conditions and in the light of greater experience. Aseptic surgery has so revolutionised all surgery that every operation requires to be re-considered in the light of the greater safety conferred upon it by antiseptic precautions, and no statistics are of the slightest value collected before this era, or, indeed, in the earlier imperfect stages of this period.

The question which I raised was whether the age of the patient might not be regarded as a determining factor where it was necessary to remove one ovary, and the other was found in an early stage of simple cystic degeneration, not yet robbed of its function, or likely soon to cause inconvenience. The plea was put forward for a girl or young woman who might thus still be allowed the chance of becoming a mother, a natural instinct which in many women—and I would say in the best women—is stronger than the love of life itself. That this suggestion is contrary to the practice hitherto generally

adopted renders it worthy of discussion in your columns. Its justification rests on the greater safety of all abdominal operations under modern conditions, so that a second operation need not be regarded as very formidable, if eventually necessary.

The case I gave in illustration was that of a young woman of exceptionally attractive appearance, whose diseased ovary having a long pedicle and not a single adhesion was removed without any exposure of the abdominal contents. The other, with a cyst on its anterior surface, I thought too good to remove. The abdomen was closed, and she was convalescent without any complication in a fortnight. So far as the technique of the operation was concerned it might have been performed by any assistant surgeon's dresser with a knowledge of ligatures and sutures. I have to thank Dr. Duncan for his suggestion of excising the cyst and leaving the ovary. On one occasion when I attempted this it resulted in so much damage that I excised the ovary, and my object was to leave an ovary not robbed of the function of reproduction. On questioning others of large experience I find they have met with similar difficulties in attempting to enucleate ovarian cysts. It will be seen that Mr. Doran and Dr. Duncan are in direct opposition, for whereas the former relates how in a woman aged fifty years he left a suspicious second ovary which eventually required a second operation Dr. Duncan says: "I go further, and say that in *all* cases of ovariotomy near or after the menopause the second ovary should invariably be removed, whether it looks healthy, cystic, or atrophied." The ovaries at this period being functionally either inactive or approaching inactivity, any suspicious ovary should, in my opinion, certainly be removed, but we perhaps want further experience before adopting, as a rule, Dr. Duncan's suggestion in the case of a healthy ovary, since the parallel double operation in men is sometimes followed by nervous symptoms that it is possible a single organ, though atrophied, may prevent. Dr. Thomson's communication in THE LANCET of May 8th is of great interest and importance, showing how long cases of cystic tumour of the ovary may remain quiescent without causing much inconvenience. His case, in which the patient had had two children during the four years he had recognised the existence of an ovarian tumour, has a special bearing on my argument. It would not be difficult, I think, to collect a good many cases where a cyst has been known not to increase for years or where the tumour has actually decreased or disappeared. May not the one ovary be allowed this possibility in a young person where its functional relation to the Fallopian tube remains intact?

Exception has been taken to my description of a young woman deprived of her ovaries as "an unnatural monster, cut off from the next generation." This has arisen from the confusion of two distinct ideas included in the same term—a potent cause of logical fallacy—viz., the child's bogey, meaning a huge repulsive beast—and the same term, as generally applied in medicine, meaning simply an abnormality, not necessarily in any way repulsive, large, or even obvious. The siren, with her tail immersed, is represented as a seductively beautiful woman, but her aquatic tail being abnormal to the human ideal renders her a monster. The second proposition, that if not previously a mother she is "cut off from the next generation" is so obviously correct as not to require further comment. The medico-legal question included in the sentence, "if married with this condition secreted [viz., loss of both ovaries] would, I presume, be liable to be divorced," has also been adversely commented upon, but I have taken a very good legal opinion on the subject, and am assured that as marriage is a legal contract, in which the procreation of children up to a certain age is definitely stated as one of the objects, fraudulently to conceal an absolute and artificial bar to this part of the contract would be a good ground for divorce.

I am, Sirs, yours faithfully,

R. CLEMENT LUCAS, B.S. Lond., F.R.C.S. Eng.,
Surgeon to Guy's Hospital.

Wimpole-street, W., May 15th, 1897.

THE LIABILITY TO CANCER IN OLD AGE.

To the Editors of THE LANCET.

SIRS,—A point of general interest was raised in a recent discussion at a meeting of the Life Assurance Medical Officers' Association, but time did not admit of its being followed out in detail. The age-incidence of cancer as a cause of death was well shown by a table derived from the Registrar-General's returns. During childhood and early life the mortality from cancer per million living is, of course, very small; it increases in middle life, especially in women, and becomes considerable in the decade forty-five to fifty-five, and large in subsequent decades, increasing slightly to the end of life. Now there is an impression derived from clinical experience that whilst malignant disease is common in the earlier period of old age, yet when a person safely reaches sixty-eight or seventy years (as the President put it at the meeting above) he is less likely to die from cancer. The above statistics seem to confute this. But the clinical impression has a basis of fact. For the mortality from cancer must be looked at also, as shown by Dr. J. F. Payne, whose lucid paper opened the discussion, in its relation to other causes of death. Comparing it in this way—I take the figures from the Supplement to the Registrar-General's Fifty-fifth Annual Report, giving the mortality in England and Wales for the ten years 1881–90—the deaths from cancer, which are as 1 to 59 of all deaths between the ages of twenty-five and thirty-five, increase to 1 to 20 in the decade thirty-five to forty-five, 1 to 11 between forty-five and fifty-five, and the same between fifty-five and sixty-five, but after this they decline to 1 to 16 from sixty-five to seventy-five, and are only 1 to 36 after seventy-five years of age. For females alone the proportion is throughout higher, and at the ages of prevalence is: from thirty-five to forty-five, 1 to 12; from forty-five to fifty-five, 1 to 7; from fifty-five to sixty-five, 1 to 8; and from sixty-five to seventy-five, 1 to 13.

Relatively, then, to other causes of death cancer attains its maximum soon after the middle period of life, between the ages of forty-five and sixty-five years; and although in later old age the actual liability does not diminish, but even increases a little, the relative liability, as compared with other diseases, diminishes greatly. Hence, although it is not strictly accurate to say that a man who escapes cancer up to seventy years of age is less likely to be attacked, there is this ground for the current belief, that he is much more likely to die from something else. Cancer is accountable for a much smaller proportion of deaths at these later ages.

The Registrar-General's report for the decade 1881–90 deals also with the local distribution of cancer; the mortality at ages over thirty-five years, in proportion to the population living at such ages, is taken to avoid inequalities arising from differing age conditions. London, as is well known, takes the lead with a mortality of 2250 per million; of course, the special hospitals are partly responsible for this. The higher rates are mostly found amongst the eastern and south-eastern counties, especially Huntingdonshire, Cambridgeshire, and Sussex; whilst in the southern, western, and midland counties the cancer death-rate is apt to be low. Dorset, Bucks, and Monmouth enjoy the least mortality at about 1578 per million; the rate for all England and Wales is 1844.

I am, Sirs, yours truly,

Finsbury-square, May 11th, 1897. R. HINGSTON FOX.

FOREIGN MEDICAL STUDENTS AND PRACTITIONERS IN FRANCE.

To the Editors of THE LANCET.

SIRS,—The campaign which has so long been waged against the invasion of French medical schools and practice by foreigners has made considerable progress during the past twelvemonth. During this period no legislation bearing upon the subject has been enacted, but Ministerial decrees and circulars have been issued materially modifying the regulations heretofore affecting foreigners. For those not intending to practise in France a degree of Doctor of Medicine has been created which, like that conferred by the German universities, does not entitle the holder to practise in the country where it is obtained. Aspirants to this degree may matriculate (upon approval of certificate showing the completion of studies approximately equivalent to those of the French *lycées*) and take the regular course at any French medical school except that of Paris. In these cases the candidate possessing a foreign medical degree is exempted from a portion of the course and examinations, the extent of such exemption varying with the value of the foreign diploma as determined by the French faculties. Whereas the creation of the new degree of an honorary character now enables the foreigner

to obtain a French medical diploma somewhat more readily than of late years, the privilege of practising within the territory of the French Republic is more difficult to acquire than before. To obtain this the foreigner, whether merely a student or the possessor of a foreign medical diploma, must not only pass all of the examinations of the regular medical course, but must now matriculate upon precisely the same condition as the native student. He may do this either at the Paris or at a provincial medical school. However, the requirements for matriculation are now such that a much more intimate knowledge of the French language is necessary for these than for the more or less technical oral examinations of the regular medical course. For this reason the present conditions are practically prohibitive unless the foreigner has been educated in France or is prepared to spend a number of years in preparation. The present requirements for foreigners and natives alike are as follows.

For Matriculation.—1. The degree of Bachelier de l'Enseignement Secondaire Classique (Lettres-Philosophie). 2. A certificate from a Faculté des Sciences of satisfactory examination in Chemistry, Physics, Zoology, and Botany after a year's study in the said Faculté.

For the Medical Course.—1. Examination: (*a*) Anatomy, and (*b*) Dissection. 2. Examination: Histology, Physiology, Biological Physics, and Chemistry. 3. Examination: Part 1: (*a*) Operations (on the cadaver) and Topographical Anatomy; and (*b*) Surgery (theory), Obstetrics (theory). Part 2: (*a*) General Pathology, Animal and Vegetable Parasites, and Bacteriology; and (*b*) Practice of Medicine (theory) and Pathological Anatomy (necropsy). 4. Examination: Therapeutics, Hygiene, Forensic Medicine, Materia Medica, and Pharmacology. 5. Examination, Part 1: (*a*) Surgery (clinical) and (*b*) Obstetrical (clinical). Part 2: Medicine (clinical). 6. Thesis upon subject of student's choice.

Whereas the increased requirements demanded of aliens have given rise to adverse criticism by a portion of the foreign press, there is, in reality, no discrimination made in favour of the native. It should be remembered that the foreigner is *ipso facto* exempt from the military service required of every able-bodied Frenchman. The usual three years of obligatory service are reduced to one for students of the liberal professions, but these must lose that year when in the midst of their work. On the other hand, the foreign student in France pursues his course without interruption and prepares in all serenity for the competitive examinations admitting to the coveted post of interne in the hospitals, while his French comrade is struggling to regain the ground lost during a twelvemonth "in the ranks."

In conclusion, the present situation may be summed up as follows, viz.:—1. The foreign medical student or practitioner unable to matriculate upon the same conditions as the native student must pursue his studies at a provincial school, and although he may obtain the French doctorate degree it will not admit him to practise upon the territory of the French Republic. 2. The foreign medical student or practitioner may qualify for practice in France and her colonies by matriculation and completion of the full course at any French medical faculté upon precisely the same conditions as the native student.

I am, Sirs, yours faithfully,

FREDERICK O. CHAMBERLAIN, M.D.

Avenue de l'Opéra, Paris, May 17th, 1897.

"EXCISION OF PAROVARIAN CYSTS WITHOUT REMOVAL OF THE OVARY OR TUBE."

To the Editors of THE LANCET.

SIRS,—The communication by Dr. Howard Kelly referred to by you in THE LANCET of May 22nd on page 1427 shows very clearly how difficult it is to get new facts accepted, or how readily the profession forgets established facts, and brings them up again as novelties. Still, we don't expect such proceedings from such places as the Johns Hopkins University. In 1874[1] I wrote, "The Fallopian tube was normal and had no other relation to the tumours than slight connexion by loose areolar tissue (as had also the ovary). . . . In an ovariotomy I had performed not long before I was struck by the fact that the ovary was perfectly healthy and separated from the tumour, as was also the tube, by a mesovarium of some extent; in fact, I did not do ovariotomy at all in the removal of the tumour, for in passing the chain of the ecraseur round its base I did not include either the tube or the ovary, and they were both returned into the abdominal cavity. The consideration of these facts led me to examine some tumours I had removed previously, and others removed by friends, and I have since subjected specimens to careful examination for confirmation of my accidental observation. The result has been that in every truly unilocular tumour I have found the ovary unaffected, though on several occasions I have found it stretched over the cyst wall."[2] In my fourth edition (1883) I developed these views further, and added: "In the records of ovariotomies performed these cases have, up till now, always been stated as ovariotomies, and the ovaries and tubes associated with the tumour have been removed with it. Both the record and the removal of the ovary are mistakes. The operation is not an ovariotomy at all, and nine times out of ten both ovary and tube might easily be separated from the tumour and left, and this practice I now always try to follow. It is very curious that those who are crying out most loudly against the unnecessary removal of ovaries have been in the habit of pursuing this practice in the case of parovarian tumours without compunction."

In my more recent work[3] I give a great deal more precise, and some very curious, information concerning broad ligament cysts. I have yet to publish the details of my more recent methods of operating in these and other cases, but I may here say that I have not removed an ovary or tube in one of them for at least twelve years. In the early part of April of the present year I had a run of three of these and had in each case to enucleate the whole tumour from its broad ligament bed in order to leave the healthy ovary and tube. Therefore it was that I condemned the proceedings of Mr. Clement Lucas as reported by himself in THE LANCET.

The conclusion from an immense experience going over thirty years is that such a thing as a unilocular tumour of the ovary does not exist save in one bottle which I placed in the museum of the Royal College of Surgeons as an example of an exception which proves the rule.

I am, Sirs, yours faithfully,

Birmingham, May 22nd, 1897. LAWSON TAIT.

[1] Hastings Essay on Diseases of the Ovary, p. 52.

[2] Vide Transactions of the Royal Medical and Chirurgical Society, 1890.

[3] Abdominal Surgery, 1889.

ON CERTAIN AFFECTIONS OF THE NERVOUS SYSTEM IN CYCLISTS.

To the Editors of THE LANCET.

SIRS,—I have been much interested in the facts recorded in a recent paper published in THE LANCET by Dr. James Taylor and Dr. Semple,[4] and I should like to record certain facts that have come to my notice in reference to the nervous symptoms exhibited by some people after cycle riding. My experience was practical rather than medical, for it was gained chiefly during the years 1885 and 1886, when I was an amateur champion cyclist, and knew most of the path- and road-racing cyclists in London, but when I had had no medical training to enable me to observe neurological phenomena. In the long-distance road races it was common to lose sensation in the feet, and several accidents occurred through slipping a pedal from this cause. This was one of the reasons why toe-clips were so universally used. When the men dismounted their gait was unsteady, the legs jerked out straight, and the feet stamped on the ground. I have noticed these things many times, not only in others, but in myself. Numbness in the perineum and penis and difficulty in beginning the act of micturition were quite common symptoms. I can remember the finish of one long-distance road race, when one of the competitors had involuntarily passed both urine and fæces during the race without being aware of the fact. I cannot call to mind any case in which the symptoms mentioned above did not pass off after a period of more or less prolonged rest. That severe exertion is not necessary to produce nervous symptoms is well exemplified in my own father's case. He learned to ride a bicycle when he was about sixty-two years old. A comparatively short ride produced numbness, trembling, and loss

[4] THE LANCET, April 17th, 1897.

of muscular sensation in his arms and legs. This was so marked that the power of writing was lost for the rest of the day after a ride of a few hours. He persevered for a while, but ultimately had to give up cycling altogether. The question how these symptoms are produced is one of much interest. Three factors are evidently of the greatest importance—viz. (1) pressure; (2) vibration; (3) auto-intoxication with waste products due to overwork.

1. *Pressure.*—The pressure of a bad saddle will undoubtedly produce nervous symptoms in the perineal region; any cyclist can verify this fact for himself without much difficulty. A really perfect saddle has yet to be invented, and when it is it will be impossible to press injuriously on the perineum, whatever position the rider assumes. Leaning forward on a cycle lessens the surface of the body exposed to the wind and decreases the effort necessary to propel the machine against a head wind. For this reason it is impossible to prevent large numbers of riders from adopting this attitude. Of late years the position of the saddle in relation to the pedals has been altered. In the modern cycle the saddle is placed much further forward than it used to be. The result of this is that with the ordinary form of saddle the position which is necessarily assumed leads to the weight being wholly borne by the perineal structures.

2. *Vibration.*—That this is of some importance will be readily granted by anyone who has ridden both solid and pneumatic tyred machines. Though pneumatic tyres have done away, to a very large extent, with vibration, the jolting on a rough road giving a succession of shocks to the body must be taken into account. The difference in comfort to the feet between rubber and rat-trap pedals is also well known. Numbness in the soles of the feet would be less likely to occur with rubber than with metal pedals. That vibration alone would produce these symptoms is not probable, for none of the twenty-three railway engine-drivers and firemen whom I have questioned on this point have ever noticed any numbness or loss of power after a day's work.

3. *Auto-intoxication with waste products due to overwork.*—During severe or prolonged exercise the untrained man rapidly dissipates his reserve tissues, and his excretory organs being unable to eliminate the waste products of metabolism he suffers from an auto-intoxication, shown either by a febrile condition, sometimes of great severity, or general nervous prostration or excitability, which often prevents appetite or sleep. It is probable that all these three factors, and possibly others, are concerned in the production of the nervous symptoms that have been observed.

I am, Sirs, yours faithfully,

PERCY FURNIVALL, F.R.C.S. Eng.,
Assistant Demonstrator of Anatomy, St. Bartholomew's Hospital; Assistant Surgeon to the Metropolitan Hospital.

May 24th, 1897.

FORCED REDUCTION OF THE DEFORMITY IN CARIES OF THE SPINE.

To the Editors of THE LANCET.

SIRS,—In your short report of a meeting of the British Orthopædic Society which appeared in THE LANCET of May 15th, it is stated that in speaking of Dr. Calot's treatment of Pott's disease, I "questioned if it were possible that such a procedure had been followed by the results described." As this statement by itself must give a different impression from that which would appear from my full remarks I beg you to allow me to add to it. It is now probably well known to your readers that Dr. Calot of Berck-sur-Mer reduces the deformity in caries of the spine by forcing the parts into a straight position under chloroform and then applies a fixation apparatus in which he keeps his patients from five to six months. At the end of this time he states that the patients are absolutely cured. It was the possibility of cure in this short time which I questioned.

The practice of straightening the spine in Pott's disease is, of course, not new, and it has been objected to by various surgical authorities. Samuel Hare, however, who published a work in 1838[1] and who was looked upon as a most reliable and skilful surgeon, having great experience with this disease, was a strong advocate for reduction of deformity, and in his work (p. 91) he gives two illustrations showing the position of the carious bones (1) in their angular position, and (2) when straightened out. I think there is much to be said in support of this method, and although I have never attempted, like Dr. Calot, to separate the diseased parts by any great force I have aimed at improving the whole position of the back, chiefly by altering the curve above and below the seat of the disease. By this means in a great many cases the abnormal projection has become markedly less, as shown in many of the illustrations in my book, "Caries of the Spine." (I would especially refer to Figs 80-81 and 87-88 in that publication.) Sometimes the projection has completely disappeared, and when this has occurred one cannot but suppose that the diseased bones have been separated at the seat of caries, and I have only seen good results from firm but gentle pressure upon the gibbosity by means of a fixation apparatus. The objection which has generally been raised against attempting to straighten out the spine has been founded upon the view that if the bones were separated the space would be so great that there would be little chance of re-formation of bone. This view I proved to be incorrect at a demonstration given at the annual meeting of the British Medical Association at Bournemouth in 1891.[2] A description of the case and specimen referred to are also given on pages 121 to 124 in "Caries of the Spine." The specimen and the history of the case show the following facts: (1) that a very large gap may occur from dissolution of several vertebræ without their usual spontaneous coalescence, the spinal cord being left exposed in the thorax and abdomen, unprotected by a bony covering; (2) that repair may take place while the undestroyed vertebræ remain separated from one another;[3] (3) that repair of this kind can progress in spite of the most adverse circumstances in respect to the general health of the patient; and (4) that in such a severe case the new bony growth requires a much longer time to become thoroughly solid than in ordinary cases.

As regards the period of repair, in the case I allude to the patient so far recovered that on Sept. 3rd, 1882, eight months after I had first seen him, he was able to walk about comfortably and his health had improved very greatly. He continued to improve apparently in every way until September, 1884, when he died from tubercular meningitis—that is to say, two years and eight months from the time I had first seen him—and it may be assumed that repair had been in active progress during at least the latter two years. Upon examination after death it was found that the gap had been filled up by bony growth, but when the affected vertebræ were being macerated all this new bone crumbled away, leaving the vertebræ as they were before the repair had taken place; therefore this case shows that two years were not sufficient to thoroughly consolidate the new bone, and, although in some patients the progress of repair may be more rapid, yet I cannot imagine that six months, as stated by Dr. Calot, would be anything like sufficient to effect a cure in any case where a considerable gap had to be filled up.

As to danger from immediate and forced reduction it may be assumed that all the cases operated upon by Dr. Calot have been in a state of active disease before repair has commenced, but should new bone have been already thrown out there would be considerable danger of producing irritation by the loosened particles of bone from the new growth, which would act as foreign bodies. A case came under my notice some few years ago which bears evidence to this effect (Case 102, page 135 in "Caries of the Spine"). It seems probable that immediate reduction may prove to be a valuable method of treatment in suitable cases, and I congratulate Dr. Calot upon his success. I question, however, if it be possible to cure such cases in six months.

I am, Sirs, yours faithfully,

Queen Anne-street, W., May 24th, 1897. NOBLE SMITH.

[1] Practical Observations on the Prevention, Causes, and Treatment of Curvatures of the Spine. London, 1838.

[2] Brit. Med. Jour., March 19th, 1892.

[3] Mr. Jackson Clarke remarks upon this fact that when the anterior common ligament remains intact at the seat of disease the periosteum will probably be attached to it and is then capable of forming new bone.

"RIGHT-HANDEDNESS."

To the Editors of THE LANCET.

SIRS,—In discussing the question whether the "faculty of bipedal progression in an erect posture" is an acquisition it is necessary to clearly define what we mean by this latter term. May I be allowed in this connexion to quote from my work, "The Causation of Disease"? "Scientifically it is

perfectly justifiable to distinguish sharply between the hereditary and the acquired; practically, however, it is quite impossible. Scientifically we may distinguish as follows. If an individual is exposed to as negative an environment as is compatible with life it is evident that there will be little or no acquisition. We may, for purposes of argument, assume such a negative environment, one, namely, under which an individual will pass through a series of developmental changes, which are the outcome of heredity pure and simple—i.e., altogether independent of external influences. It is, of course, impossible really to exclude altogether the influence of environment, since life is due to the inter-action of the organism and its environment ..... but we are justified in theoretically supposing an individual to pass through life under such a limited environment as that referred to, and we may speak of the individual such as he would then be as the strict and sole product of heredity. What he is capable of becoming under particular environments belongs to the region of acquisition" (pp. 140-1). Accepting this definition, it will be seen that the faculty of bipedal progression in an erect posture can scarcely be regarded as an acquisition. Certainly the view held by Dr. Reid, that the infant learns to walk by imitation, is erroneous—so erroneous, indeed, as to shake one's faith in Dr. Reid's other generalisations. No doubt the functional activity of the locomotor apparatus is needful for its full development and for the full development of the faculty of walking in man, but I imagine the majority of physiologists will agree with Dr. Bastian in regarding this faculty as essentially hereditary. Respecting Dr. Reid's lengthy argument in favour of language being a pure acquisition, I cannot think he can have properly interpreted Dr. Bastian's views on the subject.

I am, Sirs, yours faithfully,

Wimpole-street, May 17th, 1897. HARRY CAMPBELL.

"FRACTURES OF LONG BONES IN SCURVY-RICKETS."

To the Editors of THE LANCET.

SIRS,—The case brought by Dr. Guthrie before the Medical Society of London under the above title was one of extreme interest from a diagnostic point of view. He believed that the fractures were due to scurvy, and Mr. Morgan pointed out that in scurvy-rickets fractures of the long bones are usually near the epiphysis and not in the centre of the shaft. This term "scurvy-rickets" is confusing because of its loose application, and for clinical purposes it might be more precise to use the terms (1) scurvy, (2) rickets, and (3) scurvy associated with rickets. I think that this distinction has been definitely proved by Dr. Cheadle, Dr. Barlow, and others. My own experience has been that in scurvy in infants hæmorrhage may occur under any part of the periosteum, and when the shaft is completely separated from the periosteum by blood, complete transverse or oblique fracture may be caused merely by handling the limb. Such fractures may be at the epiphyses or in the centre of the shaft. In rickets the process is one of softening and bending of the long bones, with possibly greenstick fracture of the shaft. In scurvy associated with rickets the hæmorrhage is usually near the epiphysis, which becomes separated, as Mr. Morgan pointed out; and even if the effusion of blood extends along the shaft the bone does not appear to have the same brittleness as in uncomplicated scurvy, and fracture in the centre of the shaft is not common. I agree with Dr. Guthrie in his diagnosis of scurvy, and I should suggest that when these fractures occurred there was probably an absence of marked rachitic changes in the bones. As regards the other point he raises—whether the fracture leads to the hæmorrhage or the hæmorrhage to the fracture—I think the latter view is probably correct. One frequently meets with subperiosteal hæmorrhage without any fracture of the bone, but I have never heard of a case of fracture of a bone in scurvy which was not accompanied by subperiosteal hæmorrhage.

I am, Sirs, yours truly,

May 11th, 1897. G. A. SUTHERLAND.

"A QUESTION OF COURTESY."

To the Editors of THE LANCET.

SIRS,—I am not in the habit of seeing your valuable paper, nor did I ever imagine that I should be called on to ask you to publish a letter from me; but since a copy of your issue of May 8th has been shown to me, and my attention has been drawn to a letter headed "A Question of Courtesy," which deals with a case in my parish, I will ask you, in accordance with the motto which heads your correspondence columns, "*Audi alteram partem*," to insert a few words from me as to a portion only of Dr. Miller's statements. I say nothing as to the action of the lady guardian therein mentioned nor to that of "the parson's [i.e., my] sister," nor to that of Miss Annie McCall, M.D. Bern, &c. The two former are away from home and the latter is engaged in practice at some distance from here. I would not pretend to give an opinion on a question of medical etiquette. But I have little doubt but that those ladies could give a somewhat different version of the circumstances from that given by Dr. Miller, and I may venture to say that I am somewhat surprised to read your editorial comment upon what is nothing more than an *ex parte* statement. What concerns me is this, Dr. Miller alleges that my parish nurse "persuaded" the patient "not to come into the Cottage Hospital, but to go to Euston road Hospital." Had she done so she would have made a grave departure from her instructions, which are to work under and with the medical men in the various cases which she visits. I therefore asked her the facts of the case and she positively declares to me (1) that she did *not* persuade the patient not to go into the Cottage Hospital, but, on the contrary, urged her to do so; (2) that she never said a word to her about the Euston-road Hospital at all, and (3) that on being accused by Dr. Miller on these two heads she denied to him that she had done what he accused her of. I should not have troubled you with this letter but for this one reason, that Dr. Miller's statement respecting the parish nurse, if uncontradicted, might greatly impair the very valuable work she is doing among my sick poor without cost or charge to them.

I beg to remain, your obedient servant,

H. R. COOPER SMITH, D.D.,

May 19th, 1897. Vicar of Basingstoke.

SCOTLAND.

(FROM OUR OWN CORRESPONDENTS.)

Glasgow Medico-Chirurgical Society.

THE last meeting for the present session was held on the 14th inst., the President, Dr. W. L. Reid, being in the chair. Dr. Walker Downie showed a man, sixty-six years of age, on whom he had successfully operated for Septic Thrombosis of the Right Lateral Sinus. The condition had succeeded a catarrh of the middle ear and was regarded as a sequela of an attack of influenza from which the patient had suffered. A feature of the case which attracted some comment was the very slight disturbance of temperature manifested by the patient before operation. In the experience of the majority of the speakers septic sinus thrombosis was accompanied by considerable waves of febrile temperature.—Dr. T. K. Dalziel showed a woman who for seven years had been a victim to Severe Facial Neuralgia affecting all the branches of the fifth but always commencing with a burning sensation at the angle of the mouth, where also there was distinct and localised tenderness on pressure. These symptoms had been completely relieved by excision of the long buccal nerve. The operation performed was the external one, and though it had left a well-marked scar this result had been discounted before the operation, which had been deliberately selected in preference to the operation from the buccal cavity, with its attendant septic risks. Dr Dalziel also showed a boy, aged three and a half years, who had been born with an Imperforate Anus, a condition easily relieved at the time by the passage of a blunt instrument, but in whom subsequently such an amount of cicatricial tissue developed as to cause stricture of the bowel. There had been considerable difficulty in dealing with the case, and in the end the stricture had been excised by Kraske's operation, and with very good results. Dr. Dalziel also showed a boy who had suffered from Gangrene of the Lung, believed to be due to the entrance of some particles of toast into the air passages, and who had been treated successfully by excision of the gangrenous tissue.—Mr. H. E. Clark showed the brain removed post mortem from the body of a man on whom he had operated for Cerebral Tumour. The case in its earlier developments had been seen by Dr. T. K. Monro and by Dr. Alexander Robertson, and these gentlemen contributed the clinical history. The earlier symptoms were very obscure, being

limited to an occasional attack of vertigo and a sense of temporary numbness and weakness in the limbs of the left side. Subsequently twitchings were observed in the limbs, and on one occasion an attack of general convulsions. A family history of epilepsy to some extent confused the diagnosis, but in time headache, optic neuritis, Jacksonian spasms in the left limbs, taken with the other facts of the case, justified a conclusion of the existence of a tumour in the motor area of the right cerebral convolutions. It was decided to trephine the skull so as to gain access both to the arm and leg areas. This was done, but no tumour could be found. The bulging of the dura mater indicated the fact of undue intracranial pressure, but exploration of the brain tissue as far as this was possible was everywhere negative. At the post-mortem examination a considerable glio-sarcoma was found deeply situated in the superior parietal convolution. Mr. Clark doubted whether the tumour could have been removed under any circumstances, but pointed out that the practical surgical lesson from the case was that too much reliance must not be placed on the symptoms as indications of the precise seat of the tumour, and that in operating a large flap should be taken and if necessary numerous openings made in order to gain access to the whole motor region. Mr. Maylard supported this statement, and quoted his own experience where, in a patient with symptoms localising the tumour in the motor region, no tumour was found on trephining until a number of discs of bone were removed, and then a sarcoma was detected and successfully removed from the frontal lobe. The growth was entirely in front of the motor area, and the case therefore showed that motor disturbances did not necessarily mean direct pressure upon the motor convolutions.

Clinical Research Laboratory in Glasgow.

The directors of Anderson's College Medical School have adopted the proposal made by some members of the medical staff and have consented to the establishment of a clinical laboratory in the College buildings. It is intimated that the laboratory will be under the joint direction of Mr. R. M. Buchanan, M.B., C.M.Glasg., Professor of Forensic Medicine; Mr. R. Barclay Ness, M.B., C.M.Glasg., Professor of Therapeutics; and Mr. J. H. Teacher, M.B., C.M.Glasg.

Presentation to a Medical Man.

Mr. Robert Murdoch, Crown-street, Glasgow, has been presented with a number of medical books by the members of his ambulance class.

Provincial Infirmaries.

The directors of the Helensburgh Infirmary have received a communication from H.R.H. the Marchioness of Lorne intimating that Her Majesty the Queen has graciously consented to the use of the term "Victoria" as a title for the new infirmary. The Stirling Infirmary has received two separate donations, each of £1000, for the foundation of beds in the institution.

Aberdeen Ophthalmic Institution.

The resignation of Mr. J. McKenzie Davidson, M.B., C.M.Aberd., as ophthalmic surgeon at this institution led to an attempt to conjoin it with Aberdeen Royal Infirmary and Aberdeen Dispensary. The managers, however, resolved to continue it as a separate institution, and appointed Mr. A. Rudolf Galloway, M.A., M.B., C.M.Aberd., to succeed Dr. Davidson. Dr. Galloway has also been appointed medical officer to Aberdeen Asylum for the Blind, and Mr. Usher as ophthalmic surgeon at Aberdeen Royal Hospital for Sick Children, both in succession to Dr. Davidson, who is leaving Aberdeen. Dr. Davidson was, on the 18th inst., entertained by his professional brethren to a complimentary dinner in the Palace Hotel. Professor Ogston, Aberdeen University, presided, and in giving the toast of "Our Guest" paid a high tribute to the reputation which Dr. Davidson had made for himself in Aberdeen and the North of Scotland as an ophthalmic surgeon, and also as a teacher of ophthalmology in the medical school. Professor Stephenson, Aberdeen University, was croupier at the dinner.

Sanitary Inspectors' Congress.

This congress will take place in Aberdeen on June 17th and 18th. The corporation's public health committee will entertain the delegates to dinner, and has arranged for a drive to various places of interest in and near the city.

Aberdeen Hospital Jubilee Fund.

About £300 additional have been subscribed up to May 20th.

May 25th.

IRELAND.

(FROM OUR OWN CORRESPONDENTS.)

Mercer's Hospital, Dublin.

THE governors, at their last meeting, on May 18th, decided to permit applications for positions on the medical staff of this hospital to be received on or before June 18th, the election to take place on July 6th. It is impossible to say at present in what way the sudden and lamented death of Mr. Frederick Alcock Nixon, a senior member of the medical staff at Mercer's Hospital and an influential member of the board of governors, may influence matters. There will probably be a good many candidates for the position. Mr. J. D. McFeely, F.R.C.S. Irel., the assistant master at the Maternity Hospital, Holles-street, intends to apply specifically for the vacancy caused by Mr. Nixon's death.

Royal College of Surgeons in Ireland.

The annual election of officers will take place on Monday, June 7th. Mr. William Thomson and Mr. R. L. Swan will certainly be re-elected unopposed as president and vice-president respectively of the college. The vacancies on the Council will be contested. Mr. T. Myles of the Richmond Hospital and Dr. Cranny of Jarvis-street are candidates, while Mr. Murray and Mr. Sherlock come forward as representing the dental interest.

The Irish Medical Association.

The annual banquet of this association will take place on Monday, June 7th, at the Royal College of Surgeons. Numerous invitations have been issued by the President, Vice-president, and Council of the Association.

National Consumption Hospital, County Wicklow.

Earl Fitzwilliam has recently presented a donation of £1000 to the fund being raised for the National Hospital for Consumption for Ireland. Sir Henry Cochrane, the high sheriff for the county of Wicklow, in which the hospital is situated, has just subscribed £100.

Belfast Students and the Royal University of Ireland.

As the result of the recent honours examinations for the M.B. degree of the Royal University of Ireland Mr. Andrew L. M'Cully of Queen's College, Belfast, was awarded first-class and an exhibition of £40, and Mr. Walter B. Robertson, M.A., of Queen's College, Belfast, gained second-class, and qualified for the £25 prize. These were the only honours men. At the third examination in medicine of the Royal University of Ireland the only honours men were Mr. Graham, B.A., and Mr. Megard, B.A., of Belfast. They obtained second-class and exhibitions of £20.

Belfast Royal Hospital.

At the quarterly meeting of the general committee of the Royal Hospital, held on May 24th, Professor Sinclair, F.R.C.S.Eng., was appointed staff surgeon in place of Mr. Fagan (resigned), and Dr. Kirk was elected assistant surgeon, and Dr. McCutcheon house surgeon for the extern department. Hospital Saturday was on May 22nd, when upwards of £310 were collected, which is an increase on last year. There is a balance against the hospital of £2624 13*s.* 9*d.*

May 25th.

PARIS.

(FROM OUR OWN CORRESPONDENT.)

Developments in Skiagraphy in Paris.

THE results of much working in many directions with the x rays are now communicated weekly to the different learned societies of Paris. At the Academy of Science MM. Sabrazès and Rivière recently announced that these rays have no action whatever on cultures of bacillus prodigiosus, not interfering with its chromogenic or other properties. The rays also were found not to have the least influence upon the action of white blood corpuscles or upon the phenomena of phagocytosis, while a frog's heart exposed to the rays for several hours appeared to undergo no alteration in movement. At another meeting of the Academy of Science MM. Springer and Serbanesco gave the results of

an investigation by the means of the rays into the processes of bone formation from cartilage and the pathological circumstances under which the development may be retarded. In myxœdema skiagraphy reveals that cartilage will remain a very long time without ossifying, and that when the patient is placed under the thyroid treatment development may go on up to the age of thirty-four years. In tuberculosis, hereditary or acquired, the cartilage persists and its ossification seems to be retarded. Inhereditary syphilis the arrest of development appears due, on the other hand, to a precocious tendency to ossification. In the children of alcoholic subjects also the cartilage ossifies prematurely. To sum up, a great number of maladies modify the disposition of cartilage and its mode of ossification. Skiagraphy thus adds to our facilities for the study of faulty development a new and easily appreciable physical sign, and one which may be very useful for diagnosis and also from a therapeutical point of view.—At the Academy of Medicine M. Ollier showed recently by the x rays some of the results of bony repair after resections. From one patient M. Ollier had removed the astragalus and the skiagram showed that the bone had reproduced itself. In another patient operated upon for the results of acute osteo-myelitis, in which the astragalo-calcanean joint had been involved, M. Ollier removed the astragalus and gouged the calcaneus. Under the x rays it was seen that the calcaneus had reproduced itself and had formed a false joint with the lower end of the tibia. In another case the plate showed a white mark indicating a spot where bony formation had not taken place. In another case a bony graft was made in the middle of the tibia, filling a gap of eight centimetres in length which remained after a resection. The gap was shown to be nearly filled with reparative material, but to bring the approximating ends of the new tibia together a partial section of the peroneal muscles was necessary.—M. Bouchard at the same society communicated some results in the diagnosis of thoracic conditions arrived at by the new photography. He had been able to diagnose several cases of aortic disease. When the parts were normal he found that the pulsations of the aorta were not visible under skiagraphy, but when the valves were incompetent the skiagram showed clearly the systolic movement.—In a very interesting communication, also made to the Academy of Medicine, MM. Buguet and Gascard, professors at the School of Medicine of Rouen, have shown that the Roentgen rays are of great utility in the analysis of calculi, the approximate composition of which may now be ascertained without having recourse to the ordinary method of sawing or breaking them. By rendering the calculi transparent the rays reveal in their interior the foreign body, such as clots or solid fragments of some kind, constituting in most instances the nuclei upon which they are formed. In the case of calculi homogeneous in composition, the x rays have enabled their nature to be recognised according to their greater or less transparency. Biliary calculi are most transparent when they contain much cholesterine and comparatively little pigment. Uric acid calculi are in like manner most transparent when they contain only a small amount of calcium and magnesium salts, and ammoniaco-magnesium phosphate is of an opacity intermediate between the opacity of calcium salts and that of uric acid.

The Chair of Natural History at the Faculty of Medicine.

The Council of the Faculty of Medicine have deliberated concerning the chair of Natural History, which has now remained vacant for two years. Since the death of M. Baillon, the last occupant, new regulations with regard to medical study have somewhat modified the part played by ancillary science in the course of medical studies. Physics, chemistry, and natural history no longer form subjects of a compulsory course for the students at the Faculty of Medicine. Lectures in these subjects are given at the Faculty of Science, and after a preparatory examination in them the students are allowed to proceed to the Faculty of Medicine. The professorial chairs in these three sciences appeared thus destined to die out, as there were no longer any students to support them, but at the same time no one wished to suppress the existing professors. At the death of Professor Baillon it was agreed to do away with the chair of Natural History and there was a question of replacing it by a chair of "Parasitology," which chair has no place in the Faculty of Medicine. For two years the question has remained open and for two years the Faculty, economising to the extent of the salary of a professorship, made no haste to come to a decision. On the other hand, there was considerable feeling in favour of appointing M. Chantemesse as Professor of Natural History or of giving him a new chair of Micro-biology if it was founded. But the death of Professor Strauss having left vacant the chair of Experimental Pathology made an opening for Professor Chantemesse, who received the appointment some eight days ago. It is now decided that the chair of Natural History shall be maintained, and M. Blanchard will probably be nominated to the post in a few days. All parties will have their way in the end, as it is probable that M. Blanchard's course of lectures will deal entirely with Parasitology.

May 25th.

RUSSIA.

(FROM OUR OWN CORRESPONDENT.)

The International Medical Congress in Moscow and State Recognition.

SCARCELY more than three months remain before the opening of the International Congress of Medicine and Surgery in Moscow. As the time approaches the committees entrusted with the preliminary arrangements are showing ever greater activity. The Organising Committee has just published a *résumé* of their work during the past eighteen months, and from this it may be seen that they have already obtained important results which should ensure the success of the Congress. Much of what is now published has already appeared in the columns of THE LANCET, but some is fresh and some will bear repetition. One of the most important statements the Committee is able to make is the fact that the Czar has taken the Congress under his patronage, and that he has consented to receive deputations from the various nationalities represented at the Congress. In this country that means much, and the Czar's gracious action will give the Congress an *éclat* and popularity which it could not otherwise have attained. It is probable that the reception will take place in St. Petersburg immediately after the close of the meetings in Moscow. The Russian Government has acted most liberally towards the Congress. It has increased its original grant of 50,000 roubles towards the expenses by an additional grant of 25,000. This makes the handsome total of 75,000 roubles, or about £8000 at the present exchange. In addition to this, as already announced in THE LANCET, the State has promised free railway tickets to members of the Congress from the frontier to Moscow and back. To Russian members similar free tickets will be granted from any part of the empire.

Moscow or Canada?

The Committee has made no public reference to the regrettable fact that two English scientific bodies have selected almost the same date for congresses to be held in Canada, but several members of the Committee have privately expressed their regret that this should be so, and are inclined to regard the action of these bodies as wanting in tact, if not in courtesy. It certainly is most unfortunate that the British Association and the British Medical Association in fixing the date for their meetings did not take into consideration the fact that the International Medical Congress had long ago been fixed for the latter half of August. Some Englishmen would probably have wished to go both to Moscow and to Canada, but this is impossible under the present arrangements, and it is certain that the coinciding congresses in the two countries will mutually act unfavourably in diminishing the numbers of Englishmen attending them. On the score of cost it seems probable that a visit to Moscow will be very much less expensive than one to Canada. From the description of the routes to Moscow recently published by the English Committee, and re-printed in full in THE LANCET,[1] it will be clear that, whichever of the interesting routes there described be chosen, the travelling expenses of the whole tour will be only from £10 to £15, and that the total expenses need in no case exceed £25 or £30. Few

[1] THE LANCET, April 24th, 1897, p. 1168.

capitals are more interesting historically, and none are more beautiful than Moscow; and as, whatever route be taken, the traveller must, in addition, see one or more of the following towns—Berlin, Warsaw, Smolensk, St. Petersburg, Helsingfors, Stockholm, Gothenburg, Copenhagen (to mention only the more important), it is clear that a cheaper or more attractive month's holiday could not be conceived. It is probable, therefore, that with many who may have hesitated between the attractions of Canada and Moscow, the latter will carry the day. Already large numbers of Americans and a considerable number of Englishmen have joined the Russian Congress. The Executive Committee has requested all intending members to send in their names and subscriptions early. Forms of inscription may be obtained from the Secretary of the English Committee, Mr. G. H. Makins (47, Charles-street, Berkeley-square, W.). It is only necessary to fill up the form and enclose a foreign postal order for 1 guinea (or 25 francs or 10 roubles) and post it; the form is fully addressed. It is advisable to register the letter in case of loss.

Congress Literature.

The Executive Committee have in preparation a number of guides and *brochures* for presentation to each member of the Congress. A general guide to Moscow, a guide to its medical institutions, a description of the great University Clinique, and a full account of *Zemskaia Meditzina* (or Medicine of the *Zemstvos*—i.e., the system of free medical aid provided for the peasants throughout the country), are the most important of these. Dr. Neiding is also preparing a historical description of the Russian medical societies.

The Sectional Programmes and Transactions.

The programmes of the sections are now nearly ready and will in a very short time be issued in one pamphlet. The transactions of the Congress will, it is expected, fill from 200 to 250 "sheets" of paper. Copies will be sent free to every member of the Congress.

Orators and Orations.

The following is the list of orators selected by the Committee and the titles of their orations, which will be read in the general meetings of the Congress: Professor Danilevski (of Khartof) on "The Action of Electric Rays on the Animal Organism at a Distance"; Professor Lukianof (of St. Petersburg) on a subject not yet stated; Professor Krafft Ebing (of Vienna) on "The Etiology of Progressive Paralysis"; Professor Senn (of Chicago) on "The Diagnosis and Surgical Treatment of Acute Forms of Peritonitis"; Professor Lombroso (of Turin) on "New Horizons in Psychiatry"; Professor Leyden (of Berlin) on "The Present Modes of Treating Consumptive Patients and their State Control"; Dr. Lauder Brunton (of London) on "The Relationship between Physiology, Pharmacology, Pathology, and Clinical Medicine"; Professor Robert (of Barcelona) on a subject not yet stated; Professor Herzen (of Lausanne) on "The Significance of Physiological Psychology for Medical Education." Professor Virchow (of Berlin) and Professor Roux (of Paris) have also been invited to read papers, but their replies have not yet been received.

Accommodation for Members of the Congress.

Nothing has yet been finally arranged as to the accommodation of members of the Congress in Moscow. Some fifty medical men practising in the city have offered to receive foreign members as guests for the period of the Congress. The Committee find that they can count upon 700 beds at hotels and 1600 in furnished apartments as being available at the time. They hope to come to some arrangement with the principal hotel proprietors, who may offer special terms if a sufficient number of visitors be guaranteed. It is proposed also to print tickets with plans and information about rooms and tariff, to be given to each member of the Congress as he arrives at the terminus in Moscow.

A Congress Postponed.

The Tenth Conference of Naturalists and Medical Practitioners, which was to have been held in August this year in Kief, has been postponed to August, 1898, in consequence of the first date clashing with that of the International Medical Congress in Moscow.

St. Petersburg, May 3rd (15th), 1897.

EGYPT.

(FROM OUR OWN CORRESPONDENT.)

Scarlet Fever.

IT is well known that scarlet fever in the East is not only not the scourge it is in Europe, but is extremely rare both in Asia and in Africa. In Egypt there are no reliable records of its occurrence in any epidemic form, but since the English occupation there have been several times a few sporadic cases, which have not spread either to the English residents or to the native population. This winter there have been seven cases among the children of British soldiers occurring in six families. There is little doubt that the first case is responsible for the spread to the others, and it was therefore thought advisable to close the school in barracks, which was attended by fifty or sixty children, and since this was done there have been no fresh cases. The first case occurred about Christmas time, and it was thought that perhaps the infection might have arrived by post from England in a letter, doll, or clothing. But the parents of the child denied all communication with Europe even by letter post, and the introduction of the poison must remain a mystery. Equally impossible has it been on former occasions to discover whence the infection has arrived. It is worth pointing out that it is only during the winter months that sporadic scarlet fever has been observed among the English, while it is said to be quite unknown among the Egyptians.

Prison Department.

Crookshank Pasha has just issued a farewell report of his administration. It appears that the number of prisoners is on the increase, for on Dec. 31st, 1895, there were 8800 inmates, while on the last day of 1896 there were 10,500 male prisoners, besides 415 women. High praise is given to the medical officers, all of whom are Egyptians. During the late cholera 17 prisons were attacked, and there were 70 deaths from cholera, besides 131 deaths during the year from other causes. Two directors of provincial prisons died from cholera at Assiout and Mansurah, one of them being a medical officer.

Armenian Refugees.

The Egyptian Government has done what it can to prevent any great influx of Armenian exiles from the Turkish provinces, but there have been during the winter from 500 to 600 in Alexandria, besides about 300 who have found their way to Cairo. They are for the most part small shopkeepers or clerks and their families, unfitted for work anywhere, unable to talk Arabic, unwilling to take small salaries and coarse food, and afraid of the Soudanese climate. However, a few of them have been sent to work on the railway in Upper Egypt. In Cairo the Government has so far declined the responsibility of giving them shelter, and the charitable committee is unable to spend more on them than the £50 a month which their food costs, consisting chiefly of bread, soup, and vegetables. About 250 men, women, and children are crowded into some insanitary houses near the Armenian church, which is, unfortunately, in one of the densely populated quarters of the town. In one house there were at my visit thirty-five persons sleeping in a corridor with their beds touching each other, twenty-one were counted in a small room, and in another there were seven women, one of whom had recently been confined. Her baby and another were hanging in hammocks slung from the bedposts. The empty rooms were pervaded with the animal odour common to overcrowding, and the latrines were as primitive as might be expected. Some of the refugees are tuberculous and there have been a few cases of measles and chicken-pox among them, but fortunately as yet no typhus fever. Some English amateur theatrical performances lately provided over £300 for these unfortunate exiles.

Cairo, May 10th.

NEW ZEALAND.

(FROM OUR OWN CORRESPONDENT.)

Objectionable Advertising.

IT is my unpleasant task to draw attention to a form of advertisement which is regarded—I may say universally—by members of the medical profession in this colony as highly

objectionable, more especially as the medical profession in New Zealand are most anxious to preserve the distinction in this colony between the methods of a trade and those of a profession and to observe the rules of professional conduct which have been sanctioned from Linacre's down to the present time. The standard of the profession must be strictly kept up and rigidly maintained by each and every local branch in New Zealand. F. Wallace Mackenzie, M.B., M.S. (University of Edinburgh), practising in Wellington as an eye and ear specialist, has received for some years past almost the entire share of attention and courtesy (as far as his specialty is concerned at least) from, not only medical practitioners in Wellington, but also from those of his professional brethren in other parts of the colony, but more especially from those residing in Napier, Wanganui, Taranaki, and the east and west coast of the North Island generally. In this respect, having regard to his practice, Dr. Mackenzie can have no possible ground for complaint. Now the only unpleasant transaction that occurred during the Inter-colonial Medical Congress week, held at Dunedin in February, 1896—a gathering of medical men which will be remembered for years to come with the greatest satisfaction by all those who were fortunate enough to be able to be present—was a complaint by the members of the Napier Branch of the New Zealand Medical Association against Dr. F. Wallace Mackenzie, of Wellington, for advertising in their local paper by announcing himself in the following manner: "That Dr. F. Wallace Mackenzie, of Wellington, would arrive in Napier on such and such a day, and could be consulted at such and such a pharmacy." Now no notice of motion had been tabled, but in reply to Dr. Milne-Thomson (who acted as delegate for the Napier Branch) the president of the meeting stated that he was willing and able in the circumstances to give a decision on the interpretation of a rule. In this way Dr. Milne-Thomson was enabled to bring the subject up for a ruling. The delegate acting for the Napier Branch read the advertisement in the *Hawke's Bay Herald* announcing Dr. Mackenzie's intention to visit Napier on certain dates, and stated that what the Napier Branch maintained was "that any medical man practising in New Zealand should not be allowed to advertise his intention to visit a neighbouring town or district, and that this particular advertisement was contrary to the rules of the Medical Association." This rule had been passed at the previous Auckland meeting. A discussion then ensued as to whether this was or was not a rule of the Association. The President (Dr. Lindo Ferguson of Dunedin) replied: "That it was certainly a rule which had been adopted by the Auckland meeting, which had adopted a very high standard, and it seemed to him that there could be no argument about the decision. An advertisement was permissible to a person carrying on a practice for two months in the town or county in which he proposed to practise and no more. The form of the advertisement was absolutely laid down, and the practitioner was not allowed even to insert his hours of consultation or his qualification, and that it was not necessary for the Council to express any further opinion. The subject was so clear that argument was out of the question." The medical men practising in Napier felt that Dr. Mackenzie had no right to announce himself in this manner in the locality of Napier, where a specialist in diseases of the eye and ear, who has gained the confidence of his medical brethren, resides. Now, after Dr. Mackenzie's experiences in connexion with the Napier branch's strictures on his advertising methods I should have thought that he would not allow himself to be placed in such an equivocal position again. This does not appear, however, to be the case, as the following advertisement, which appeared in the *Wanganui Herald* during the end of February and the beginning of March, 1897, indicates:—

NOTICE.

DR. F. WALLACE MACKENZIE has removed from 139, Upper Willis Street to 162, Upper Willis Street, Wellington, opposite St. Peter's Church.

Dr. F. Wallace Mackenzie, the well-known specialist, of Wellington, has removed from 139, Upper Willis Street. His present address is 162, Upper Willis Street, opposite St. Peter's Church, Wellington.

Dr. Mackenzie purposes being in Wanganui on the 16th, and will stay at Chavannes' Hotel.

In nothing is the tradition of medical conduct more particular than in reference to the treatment of medical brethren. There is no sin more gross in medical ethics than the combination of medical men formed with the object of "running off the road" by disparaging and harsh statements the professional skill and personal character of a brother practitioner, and I have no desire to unduly hurt Dr. Mackenzie's feelings, but he must be taught to observe our honourable traditions and maintain them. The above advertisement having been inserted in the *Wanganui Herald* for ten days or so, it was decided to call a meeting of all the members of the profession practising in Wanganui to discuss Dr. Mackenzie's attitude. It was then unanimously decided that the following communication should be forwarded to the honorary secretary of the Wellington branch of the New Zealand Medical Association for their consideration, and a copy of it forwarded to Dr. Mackenzie.

Wanganui, March 6th, 1897.

The Hon. Secretary, Wellington Branch of the New Zealand Medical Association.

SIR,—We beg to draw your attention to a notice which is appearing in the *Wanganui Herald* and we forward you a copy of the newspaper containing the same [notice as already printed above]. We beg to submit that the insertion of the above notice in a Wanganui paper, over a hundred miles from the residence of Dr. Mackenzie, is uncalled for, and not in accordance with the best traditions of the profession.

Signed by all the members of the medical profession practising in Wanganui.

The Wanganui society's honorary secretary received the following letter in reply from Dr. Mackenzie:—

Mr. Hatherly. Wellington, March 9th, 1897.

DEAR SIR,—The Wellington branch of the association was wound up at the February meeting. The branch had a rule *re* advertising to the effect that a member on changing his address might advertise the fact in the papers in the district in which he is practising for a period of fourteen days. My advertisement is strictly in accordance with that rule; the district in which I am practising is the Wellington Provincial District, which to me for practice far exceeds the limits of the province itself. Kindly inform those who were anxious for enlightenment that, firstly, my innocent little notice was for the benefit of my patients solely; I do not require to advertise myself—my friends do that. Secondly, the advertisement was called for by a local appearing in the *N.Z. Graphic* to the effect that I was giving up practice in Wellington and going to settle in Picton, the fact being that I had merely moved into a new house without advertising the fact of my removal. Thirdly, if the mortmain of tradition is going to lay its icy grasp on the profession here, if the profession is to be guided by the traditions of the past rather than by the good sense of the present, I am sorry for it. Since you do not like the ad. it will not appear any more.

Yours faithfully,

F. WALLACE MACKENZIE.

Dr. Mackenzie's ideas concerning the "icy grasp of tradition" are unique. I trust that this will be the last occasion upon which I shall have to criticise in such a case. It is a most unpleasant task, but it is one that has to be performed when the occasion demands it.

Cancer in New Zealand.

By a recent return of the Registrar-General the deaths from cancer during the year 1896 amounted to 389, of which number 205 were males and 184 females, the rate of mortality per 10,000 living being equal to 5·50. The apparent increase, however, of the deaths shown in the table below is in all probability due to a more advanced care in diagnosis and a more accurate return as shown in the death certificates than had existed during the previous decade. The total deaths from all causes in the colony during the year 1896 totalled 6432. By these figures, then, it is shown that the percentage of deaths due to malignant disease is equivalent to 6 per cent. on the whole death-rate. The following table shows the number of deaths from cancer in every 10,000:—

Year.	New Zealand	England.
1881	2·69	5·20
1886	3·68	5·90
1891	4·68	6·92
1896	5·50	7·13 (1894)

New Zealand Annual Medical Conference.

The 1897 Conference of the members of the medical profession was held this year at Nelson on March 9th and following days, under the able presidency of Dr. Cieghorn, who gave a most carefully prepared and practical address treating for the most part on the club question and on general matters in which the profession and the public were mutually concerned. I hope to forward a complete account of the proceedings by the next mail. The meeting was a great success from a scientific and social point of view, and the visitors from various parts of the colony were most hospitably entertained by their professional brethren practising at Nelson.

Obituary.

GEORGE CHAPMAN BRIGGS, M.B. LOND., M.R.C.S. ENG., L.S.A.

WE regret to have to record the death of Dr. G. C. Briggs, of Harrow-on-the-Hill, which occurred on May 5th from diabetic coma. Born in 1847 at Burgh-le-Marsh, in Lincolnshire, his father farming his own land in that county, he was educated at Uppingham School under the well-known Dr. Thring, and after reaching the sixth form he left to commence his studies for the medical profession by serving an apprenticeship to his uncle, the late Mr. Frederick Fawssitt, F.R.C.S., of Wisbech. In 1867 he became a matriculated student of King's College, London, and obtained a junior scholarship, two years later the Warneford scholarship, and the senior scholarship in 1871. He was also a prizeman in obstetrics, chemistry, and other subjects. After qualifying in 1871 he held the post of resident accoucheur in King's College Hospital and graduated M.B. Lond. in 1874. In the same year he became the junior partner in the firm of Bridgwater and Tonge at Harrow-on-the-Hill, and at the time of his death was the senior member of the firm of Briggs, Bindloss, and Lambert. For the last ten years Dr. Briggs has acted as chief medical officer to Harrow School in addition to other public appointments, such as Poor-law medical officer and public vaccinator to the Harrow district. He was also a member of the Council of the Medical Officers of Schools Association. Dr. Briggs had no special pursuits or hobbies outside his profession, and may be said to have thrown the whole of his energies into his work. Possessed of great natural ability, and of a genial and kindly disposition, he was beloved and esteemed both by his patients and by all who knew him, whether rich or poor, and although for the last six years he was aware that he was the subject of a dangerous and debilitating disease, he worked on cheerfully and with an unselfish devotion, placing the interests and welfare of his patients before everything. A few weeks ago he was attacked with middle ear disease and, diabetic coma supervening, the end soon came.

He married in 1879 the daughter of Mr. H. G. Cooke, of Alverstoke, near Gosport, Hants, and the sister of Dr. Marriott Cooke, his friend and fellow-student at King's, who is now the superintendent of the Worcester County Asylum. Mrs. Briggs survives him, as do two sons, who are now studying at Harrow School. His body was laid to rest in the churchyard adjoining the old parish church at Harrow, and was followed to the grave by many sorrowing relations and friends.

EVAN DAVIES, L.R.C.P. & S. EDIN., &C.

THE neighbourhood of Maesteg, Glamorganshire heard with much regret of the death of Mr. Evan Davies, which took place on May 18th under sad circumstances. Mr. Davies was thrown from his horse on the preceding day, whilst returning from visiting a patient, and sustained a fracture of the skull, his injuries soon proving fatal. The deceased received his medical education at the Glasgow University and the Western Infirmary, Glasgow, and obtained the qualifications of L.R.C.P. & S. Edin., L.F.P.S. and L.M. Glasg., in 1892. He was surgeon to North's Navigation Collieries, and formerly held the appointment of medical officer of health for the Maesteg Urban District. He was only thirty years of age at the time of his death, and was extremely popular in the district. On May 22nd he was to have been presented with a gold pendant, bearing a suitable inscription by the members of the St. John Ambulance Class, of which he was the honorary instructor. The funeral, which was a public one, was largely attended.

DEATHS OF EMINENT FOREIGN MEDICAL MEN.—The deaths of the following eminent medical men are announced:—Dr. Charles Dubreuilh, formerly surgeon to the Bordeaux Hospitals.—Dr. Adolfo Moreno Pozo, Professor of Topographical Anatomy and of Operative Medicine in the University of Madrid.—Dr. H. Sünder y Rodiguez, a well-known Madrid surgeon.

THE GENERAL COUNCIL OF MEDICAL EDUCATION AND REGISTRATION.

THE sixty-second session of the General Council of Medical Education and Registration was opened on Tuesday, May 25th, by the President, Sir Richard Quain.

Sir Richard Quain delivered his address with an energy surprising to those with knowledge of the grave illness through which he has lately passed and to which he alluded with some feeling. It may safely be said that scarcely any other man in London would have attempted such an undertaking in the same circumstances, and with equal certainty it may be affirmed that Sir Richard Quain would not have allowed any patient of his to do so. Either he has more indulgent advisers than his patients have, or he is, as one of his distinguished colleagues said, a law unto himself.

The new Pharmacopœia begins to loom in the distance. Large parcels in brown paper might be seen before each member of the Council on the first day of the session which turned out to be proofs of the work—in a very imperfect state, of course. It is expected, as the President said, to be completed by the November meeting. Meanwhile, its present state of forwardness must be consolatory to Sir Richard Quain, who has always taken great interest in this part of the Council's work and regards the pilotage of the new edition as his chief work for the Council.

The varied character of the business of the Council will be best gathered from the opening address of the President and the forecast in THE LANCET of last week. The most noticeable event of consequence in the proceedings up to the time of our writing is the resolution of the Council to act on the direction of the Privy Council in the matter of the appointment of Surgical Examiners for the Apothecaries' Hall of Dublin. Our readers will doubtless study for themselves the statement on this subject submitted to the General Medical Council by its legal advisers. It contains a gentle—we will not say rebuke but—reminder that the course taken by the General Medical Council was never favoured by its legal advisers. They have been throughout of opinion that in the circumstances the Council had no option but to appoint surgical examiners to a medical corporation that had failed to find in its own part of the kingdom a surgical corporation to act in conjunction with it. The General Medical Council, construing the words "if it see fit" in the common-sense way in which all men but lawyers construe them thought it had a discretion. It has been disabused, and now accepts the legal reading with a fair amount of grace and with the comforting assurance of the lawyers that whatever happens the Council is relieved of all responsibility.

The examiners whom it will now appoint will be not merely examiners but inspectors, for it will be their duty under Clause 2 of Section 5 of the Act of 1886 to secure at the examinations the maintenance of such standard of proficiency as is required by the Act. The whole incident is a very noticeable one in the profession. It not only helps the General Medical Council to realise that in the last result the Privy Council is a *superior medical* authority, having power to do that which the Council fails to do in the construction or continuance of the medical institutions of the country, but it will bring home to the medical profession its subjection to law—or, rather, to lawyers and their construction of law.

The Privy Council has shown on the whole consideration to the General Medical Council while maintaining a strict and technically legal view of the Act. Meantime the Apothecaries' Hall of Ireland has a new lease of life and a new opportunity of showing that (as the Duke of Devonshire, with very doubtful grounds, seemed to think) it is really the gate and entrance of a considerable number of the general practitioners of Ireland. Everybody will wish and believe that in this new lease of life it may have every fair-play at the hands of the General Medical Council.

The subject of the Midwives Bill came transiently before the Council at its first sitting. A tendency to warmth on the very mention of the subject was creditably restrained, and all parties accepted a motion by Dr. McVail that inquiry be made as to whether the Government still desired the Council to consider the Bill this session. The Government, in referring all such Bills to the General Medical Council recognises the medical importance of the question and imposes on the Council the duty of attention.

The Council on Thursday, after approving the minutes of Wednesday's proceedings, engaged in the consideration of a number of penal cases. Our report of what was done will be published in next week's issue. The Council adopted the form of the address to be presented to Her Majesty the Queen on the occasion of the completion of the sixtieth year of her reign, and they received a statement from the President with regard to the deputation on the subject of death certification to the President of the Local Government Board. He said the deputation would, among other things, press upon the President the registration of undertakers and the separation of deaths from births and marriages.

It was agreed by the Council to make representations to the Privy Council with regard to a proposed law in Italy modifying the law of the country which permits foreign medical men to practise there.

The report of the Pharmacopœia Committee was also brought up on Thursday morning and adopted.

TUESDAY, MAY 25TH.

THE sixty-second session of the General Council of Medical Education and Registration was opened to-day in the offices of the Council, Oxford-street, London. To the great satisfaction of all the members Sir Richard Quain was able to take his accustomed place in the chair and to open the session as usual with a short presidential address.

The Recently Elected Direct Representatives.

Dr. R. R. Rentoul, Mr. George Brown, and Dr. Glover, the new Direct Representatives for England, attended, and Dr. Glover introduced to the President his two colleagues. Dr. Bruce, the Direct Representative of the Scottish practitioners, was also in his place.

Introduction of Professor Robert William Reid.

Sir WILLIAM TURNER introduced Professor Robert William Reid, the successor of Dr. Angus Fraser in the representation of the University of Aberdeen.

The President's Address.

The PRESIDENT commenced his address with some words of welcome to the new members and a sympathetic reference to the failing health and consequent retirement of Mr. W. J. C. Miller, the Registrar of the Council, and continuing said:—

Since our last session we have completed the purchase of the remaining (leasehold) interest of the Office of Works in our premises, and those of the tenant in Hanover-square. The purchase of the freehold and leasehold of the premises, together with all the expenses incidental thereto and to the re-building and alterations which have been undertaken, have cost the Council £22,506 13*s.* 10*d.*, an amount which has been advanced by the English Branch Council at 3 per cent. interest. We may therefore consider that we hold both the premises at a rent of £675 per annum. From this sum we have to deduct £250 per annum paid for 16, Hanover-square, leaving our rental at £425 compared with a former nominal rental of £300 which was paid to the Office of Works for the unaltered premises. Our additional rental, therefore, will amount to £125 per annum for eight years, when the whole premises in Hanover-square and Oxford-street will be at our own disposal. We have taken such action as was possible in the matter of the registration of deaths. The Council's resolution of Nov. 27th, 1896, in regard to death certification was formally communicated to the Registrar-General on Dec. 3rd, 1896. He answered to the effect that so far as the law was concerned he was unable to find any irregularity in the conduct of the registrar of Hetton-le-Hole in accepting the informal "statement from the unregistered—perhaps unqualified—attendant as part of the information of the informant." Such being the answer of the Registrar-General, we had, in accordance with the direction of the Council, to seek an interview with the President of the Local Government Board. Various circumstances, including the illness of the President of the Board, and the absence abroad on important official business of Dr. Thorne Thorne, have rendered it hitherto impossible to obtain an interview with the right honourable gentleman. In the meantime an important statement has been prepared, with the assistance of the legal advisers of the Council, for submission to him, and an early opportunity will be sought of presenting it by a deputation. The Executive Committee has prepared a Report on the Disciplinary Powers of the Licensing Bodies—a matter which was referred back to it by the General Council on Nov. 24th, 1896. It will be seen that two bodies—viz., the Victoria University and the University of Durham—have taken steps in the direction of obtaining modifications of their Charters, which would give them penal powers over their graduates. The University of Cambridge has already obtained, and exercised, such powers, and the Royal University of Ireland is said to be engaged in obtaining them. It is much to be regretted that the Scottish Universities still find difficulty in moving in the matter. I have very great satisfaction in announcing that the material for the British Pharmacopœia has been completed, and will be placed in the hands of the Council during the present session. This material has been most thoroughly revised by the eminent experts who were invited to assist in the revision, and who have done so with great care. The most hearty thanks of the Council are due to these gentlemen for their services, to the Pharmacopœia Committee of the Pharmaceutical Society, and also to the Pharmacopœia Committee of the Council. We have recently taken advantage of the introduction into Parliament of a measure for the regulation of the payment of the Metropolitan Police to propose the insertion of a clause, giving the penalties inflicted in all cases under the Medical Acts to the treasurers of the General Medical Council, so as to fulfil the intention of the provisions of the Medical Act, 1858, Section 42. It will be remembered that in London the penalties go to the police, and that claims to these penalties have arisen also—outside the Metropolis—under certain local Acts.

[Sir Richard Quain here mentioned that the business before the Council would include the decision and direction of the Privy Council with reference to the appeal of the Apothecaries' Hall of Dublin, the question of the Medical Aid Associations, a revised Standing Order Dealing with Penal Removals, and Reports by the Dental Education, the Examination, and other committees. He continued:]

A Bill for the Registration of Midwives (entitled the "Midwives Registration Bill") was forwarded from the Privy Council Office on Feb. 16th ult., with a request that the General Council would favour their lordships with an opinion thereon, and the Executive Committee, at its meeting on Feb. 22nd, directed that the resolutions passed by the Council on Nov. 29th, 1889, and June 5th, 1895, should be forwarded to the Privy Council. Dr. Rentoul has informed me that he had prepared a Bill which he was desirous of submitting to the Council on the subject of Midwives, but I pointed out to him the very decided language used by the Council on Nov. 29th, 1889, on the subject of not interfering with legislation for Midwives. The closer we keep within the paths marked out for us by our Statutory Powers, the less trouble we shall have, and the more satisfactory will be the result of our proceedings.

Sir WILLIAM TURNER moved that the President be thanked for his address and be requested to allow it to be entered on the minutes. He ventured to say that they ought not to regard this as a mere formal motion. They all knew the very severe operation that he (the President) had to undergo not many weeks ago, and they were glad to think that he had so successfully recovered from it and that he felt able to preside over them on this occasion.

Mr. BRYANT, seconding this motion, desired to echo what Sir William Turner had said.

The PRESIDENT thanked the Council for their kindness, and said that whilst he was spared to live he would do his best for the Council.

Business Committee.

Mr. ALLEN, who, in the absence of Mr. Miller, acted as clerk, intimated that Mr. Bryant, Dr. MacAlister, Dr. Moore, and Sir William Turner had been nominated to the Business Committee.

Mr. GEORGE BROWN thought that there should be one of the Direct Representatives on this committee, seeing that there were matters coming before the Council of very great interest to general practitioners. Perhaps Mr. Bryant would see his way to retire in favour of Dr. Glover.

The PRESIDENT said that there was no order of this kind. These gentlemen were selected by reason of their knowledge of the business of the Council and their experience, and they were the best men that could be named for the purpose.

Dr. BRUCE said that, speaking as one of the Direct Representatives, he thought they could not get a better man on the committee than Dr. MacAlister.

The committee as proposed was thereupon agreed to.

The Queen's Jubilee.

The PRESIDENT moved that a committee be appointed to prepare an appropriate address to Her Majesty on the completion of the sixtieth year of her reign. He was sure it would be the spontaneous wish of the Council that they should present an address on this occasion.

The motion was at once carried with acclamation, as was also a motion to expend a suitable sum upon illuminations on Jubilee Day.

Results of Examinations.

Mr. ALLEN presented a number of tabulated statements showing the results of various examinations in 1896.

Dr. HERON WATSON moved a vote of thanks, which was seconded by Dr. THORNE THORNE, to certain officials who had supplied information for the statements.

Dr. ATTHILL said he was anxious to know whether it would be possible to obtain information which would enable them to trace the candidates who had failed in any particular subject. They had received a circular in Ireland stating that a Licentiate of his College had failed in spelling, and he thought it most desirable that they should know where such a Licentiate received his certificate of preliminary education.

Mr. ALLEN said that after the last meeting of the Executive Committee he had applied to the Navy Department asking for the names of candidates, and they wrote back expressing regret that they could not supply them.

Mr. GEORGE BROWN said it was a great scandal that men should be admitted into the medical profession who did not understand the elementary rules of the English language in regard to spelling. From these returns he found men were passed with 26·7 per cent. of marks, 28·3 per cent., 36·6 per cent. and so on, very many being under 50 per cent.

Sir DYCE DUCKWORTH said that this question had been carefully considered by the Naval Medical Examining Body, of which he was a member. As a Board they could do nothing, for they examined numbers not men, but they found abundant evidence of defective preliminary education. It was quite manifest that men were allowed to pass who were very deficient in general education, and he thought it was the duty of this Council to call upon all the examining bodies to furnish them with the means of getting information about them. It had been proposed that this might be done by insisting that every candidate for a diploma when he registered himself as a student, should put alongside his name the body before which he passed his preliminary examination. In that way it would be possible to trace him. The examining bodies appeared to wash their hands of this matter entirely. It was true, of course, that very often many of these men who could not spell and knew nothing about punctuation and could not construct a grammatical sentence were exceedingly well up in their professional work. At the same time he thought they should get at the root of this matter and find who it was who was responsible for the admission of men of inadequate education into the profession.

Dr. BATTY TUKE reminded the Council of what had been done by them last year, and said that the Education Committee was carefully considering how the standard of preliminary education could be raised and would report next November.

Dr. HERON WATSON said that this debate could have no relevance to the motion before the Council.

Dr. ATTHILL said he would be quite willing to postpone it.

Dr. MACALISTER suggested that the Council might furnish the Navy and the Army Board with a copy of the Students' Register, and they might communicate with the Council with reference to particular candidates without mentioning any names.

The motion was then adopted.

The Application of the Apothecaries' Hall of Dublin.

Mr. ALLEN read the order of the Privy Council directing this Council to appoint assistant examiners in surgery in the Medical Act of 1886 for the purpose of qualifying examinations to be held by the Apothecaries' Hall of Dublin.

Mr. ALLEN also read the following statement by the Council's legal advisers, viz. :—

Understanding that some members of the Medical Council wish for further information respecting the procedure of the Council, and the result of the decision of the Privy Council in the Apothecaries' Hall, Dublin, case, the legal advisers of the Medical Council submit the following statement:—

1. After the combination of the Royal College of Surgeons with the Apothecaries' Hall had come to an end, the Apothecaries' Hall reported to the Medical Council their inability to combine with any other Corporation, and applied to the Medical Council to appoint assistant examiners in accordance with Section 5 of the Medical Act, 1886. On the consideration by the Medical Council of the application of the Apothecaries' Hall, the opinion of the Council's legal advisers, as expressed to the Council, was that the grounds on which it was proposed to refuse the application of the Hall involved in effect an exercise by the Medical Council of a jurisdiction which properly belonged to the Privy Council alone.

2. The Medical Council having declined to accede to the application of the Hall, that body applied to the Privy Council, who referred the matter back to the Medical Council for reconsideration. The Medical Council thereupon gave the Apothecaries' Hall a further opportunity of trying to effect the necessary combination; but the Hall was unable to effect it and reported its inability to the Medical Council, and again applied for the appointment of examiners.

3. The Medical Council having again refused to appoint examiners, the hearing before the Privy Council was resumed, and the Privy Council came practically to the conclusion that the procedure adopted by the Medical Council in refusing to appoint assistant examiners for the Hall was not a regular exercise by the Medical Council of their jurisdiction, the power to deprive a body of its right to hold a qualifying examination being vested solely in the Privy Council. The Privy Council accordingly by their decision directed the Medical Council to appoint assistant examiners in surgery.

4. The direction given by the Privy Council relieves the Medical Council from all responsibility in the matter.

5. The Privy Council, besides being the highest judicial tribunal in the United Kingdom, is the tribunal on whom Parliament has conferred a special and plenary authority to act as the lords of the Council think fit in such a matter as an application by one of the medical corporations for the appointment of assistant examiners. (Act of 1886, Section 19.)

6. The legal advisers of the Medical Council are of opinion that the Privy Council has not by its direction to the Medical Council intended to interfere, or, in fact, interfered, with the Medical Council in the exercise by the Medical Council of its statutory jurisdiction, but that the view adopted by the Privy Council has been that the Medical Council had in its refusal to accede to the application of the Hall in effect taken upon itself to exercise a jurisdiction which belonged to the Privy Council alone and not to the Medical Council.

7. The legal advisers of the Medical Council respectfully suggest in these circumstances that the direction of the Privy Council should be acted on without comment.

Mr. ALLEN further read a letter from the secretary of the Apothecaries' Hall of Dublin, laying before the Council the names of two gentlemen who were proposed as assistant examiners in surgery.

Mr. TICHBORNE said that to put the matter in form he would move the following motion—

"That, subject to the orders of the Council, Messieurs—

"L. Hepenstal Ormsby, M.D., F.R.C.S., Surgeon to the Meath Hospital and County of Dublin Infirmary; Surgeon to the Children's Hospital, Dublin; and ex-Examiner in Surgery, Royal College of Surgeons, Ireland;

"Frederick Conway Dwyer, M.D., B. Ch. Univ. Dublin; Sen. Mod. and Gold Medal in Exper. Science, Ex. Med. Schol., T.C.D., Surgeon, Jervis-street Hospital; Demonstrator of Anatomy, Royal College of Surgeons, Ireland;

"be appointed by the Council to be Surgical Examiners to assist the Apothecaries' Hall of Ireland in the conduct of its qualifying examinations."

These names were the names laid before the Council in the letter of the secretary of the Hall, and were the names of gentlemen well qualified to act as examiners.

Sir JOHN BANKS seconded the motion, saying that he knew the two gentlemen to be highly fit and proper persons to be engaged in this work.

Mr. BRYANT said that this was a subject which he thought would be better discussed by a small committee, and he begged to move as an amendment: "That the Council act on the direction of the Privy Council and appoint a committee to nominate the assistant examiners, to recommend the amount of the remuneration to be attached to the office, and to report to the Council during the present session."

Dr. BATTY TUKE seconded this amendment.

Dr. THORNE THORNE said it was important for the Council to remember that the duty of these assistant examiners would be to secure at the examinations the maintenance of such standard of proficiency in surgery as was required

Sir DYCE DUCKWORTH said he should like to make a few remarks upon the statement of the legal advisers. For many years the Council had been doing this work of inspecting examinations, and he, as chairman of the Examination Committee, felt very keenly on the matter. As the result of these inspections the Apothecaries' Hall was reported again and again as inadequate, and the Council took definite action upon that. The Council had done its duty most carefully and prudently. Every step was taken by the direction, and under the eye, and by the advice, of their legal advisers, and therefore he found great difficulty when he read this statement which had been put before the Council. What else could they do than they had been advised to do? If they were told that everything turned upon these words, "if we see fit," and they were told that the legal interpretation of these words was that "if you see fit you shall," his reply was that they were not lawyers at that table. They were ordinary Englishmen of common sense, and the ordinary interpretation of the words entailed the exercise of discretion. The Council exercising its discretion acted as it did. The work of the members of the Council had been rudely interfered with, and the question was whether it was of any use for them to continue this work of inspection of examinations. What was the use of inspecting bodies if they had no power of action? It seemed to him that the Act would require to be altered so as to enable the Council to be of any further use, and those words would have to be removed from the Act or interpreted in some intelligible way. They were told that the Privy Council had not intended to interfere, and had not, in fact, interfered with the discretion and usefulness of the Medical Council. That, he maintained, was not the opinion of the majority of those who sat around that table. He thought it would be found that their authority had been most seriously encroached upon and their usefulness greatly impaired, and that, in fact, their action as a statutory body appointed for definite purposes was completely stultified.

The PRESIDENT said it would be the duty of the Medical Council to see that a proper standard of proficiency was required at the examinations and to report to the Privy Council.

Dr. GLOVER said he could not take the view that Sir Dyce Duckworth did. He had this advantage over Sir Dyce Duckworth, that he had heard the proceedings before the Privy Council on both occasions. He was convinced that the Privy Council acted as if they felt the greatest respect for the General Medical Council, and he saw nothing in what had happened to alter that view. He hoped the Council would clearly understand that what had been established was that there had been some error in the Council's proceedings. They did not lose any moral force as the result of the decision. They had the same rights as they ever had, and if any representation required to be made in future as to the inefficiency of one of the qualifying bodies that representation would have effect. In this case, according to the opinion of the Privy Council and according to the General Medical Council's own legal advisers, the Council had proceeded in a wrong manner. He did hope, therefore, that the Council would not adopt Sir Dyce Duckworth's opinion that there was anything disparaging to the General Medical Council in the course which the Privy Council had taken. If the examinations of the Apothecaries' Hall of Dublin did not in the new circumstances proceed to the Council's satisfaction they could make a representation to that effect to the Privy Council. In this instance he was convinced that the Privy Council had acted under a great sense of responsibility, and were only anxious to act with the General Medical Council to promote the ends that Council had in view.

Mr. TICHBORNE, who mentioned that he also had heard the whole proceedings in the appeal, endorsed all that Dr. Glover had said, and he was quite sure that the Privy Council had treated the General Medical Council with the greatest respect. To his mind that was the reason why the authorities of the Apothecaries' Hall had been sent back to the General Medical Council.

Mr. TEALE said he also could not agree with Sir Dyce Duckworth. The whole thing had arisen because the Council had got into an anomalous position. The body the General Medical Council brought before the Privy Council was not the Apothecaries' Hall, but the Conjoint Board, a body which had ceased to exist before the General Medical Council's representation could take effect. The Council had thought they were able to exercise a certain discretion, but the decision of the Privy Council showed that they could not. The decision did not alter his mind in the least. What they had to do was to appoint examiners as the Privy Council directed, and having done that if the examinations were not to the Council's satisfaction they could report to that effect.

Professor GAIRDNER pointed out that when this matter last came back to them from the Privy Council it came back in an indefinite form, and in connexion with the application by the Apothecaries' Hall to appoint, not only surgical, but also medical examiners. That was the last shape in which the matter was last before them, and all the proceedings bore on that aspect. In that aspect of it he agreed with a great deal that Sir Dyce Duckworth had said. The Council had condemned the medical side of the Apothecaries' Hall, and it was apparently a very inconsistent thing for them to help a body to get examinations which it had been conducting inefficiently. What the Privy Council asked them to do now was something quite different in principle. It was not the medical examiners, but the surgical, that they were now asked to appoint, and the reasons for their being directed to appoint these surgical examiners had no reference to the efficiency of the Apothecaries' Hall in its own department. Its reference was simply to the fact that unless the Council appointed these examiners the Apothecaries' Hall would be disabled by a side wind from conducting examinations that would qualify because the Hall could not get any of the other bodies in Ireland or elsewhere to give these examiners. While agreeing with Sir Dyce Duckworth that the position was a difficult one for the Council, he yet thought it amounted only to this, that they had simply to do now what they had statutory powers to do in order to enable the body in question to conduct examinations in legal form legally.

Sir WILLIAM TURNER pointed out that the proposals raised the question whether they should appoint examiners at once or defer the appointment till a committee had considered the matter. The amendment included the question of remuneration. That was a very important matter and one which was specially referred to in the Act. There was a specific sub-section of the Act referring to it, and it seemed to him that they could not pass such a motion as that proposed by Mr. Tichborne in the form in which it was given to them because they must specify the amount of remuneration that was to be given. The amendment, therefore, was a proposal which he thought they might well adopt at this stage of the discussion.

Mr. TICHBORNE was perfectly willing to accept the general principles just laid down. Reference to a committee would be a perfectly good way of dealing with the matter, but the Apothecaries' Hall ought to be represented on any committee appointed. The Hall would be prepared as regards any remuneration the Council might fix. When last the Council granted examiners for the Hall they fixed the remuneration at five guineas for each of the examiners at each examination.

With the consent of the seconder the motion was withdrawn and Mr. Bryant's proposal was unanimously adopted. A committee of the following seven members was then appointed—viz., Mr. Bryant, Mr. Tichborne, Dr. Heron Watson, Mr. Teale, Dr. Batty Tuke, Mr. Brudenell Carter, and Sir John Banks.

On the motion of Dr. THORNE THORNE, seconded by Dr. MACALISTER, it was agreed to print and circulate among the members of the Council the full report of the proceedings in the appeal to the Privy Council.

Midwives Registration Bill.

The next business was the consideration of a communication from the Privy Council transmitting a copy of the Midwives Registration Bill introduced into the House of

Commons on Feb. 9th, together with a resolution thereon adopted by the Executive Committee on Feb 22nd last. The following were the documents:—

(i.) COMMUNICATION FROM THE PRIVY COUNCIL.

"78,360. "Privy Council Office, Whitehall,
"February 16th, 1897.

"SIR,—I am directed by the Lords of the Council to transmit to you, to be laid before the General Medical Council, the accompanying copy of the 'Registration of Midwives' Bill, which has been introduced this session in the House of Commons by Mr. Tatton Egerton and others.

"I am to request you to be so good as to move the General Medical Council to favour their lordships with their opinion on the Bill in question. "I am, Sir, your obedient servant,
"C. L. PEEL.

"The Registrar of the General Medical Council."

(ii.) RESOLUTION BY THE EXECUTIVE COMMITTEE.

"*Resolved:* 'That the following be sent to the Privy Council as the answer of the Committee to this communication:—

"'That, as the meeting of the General Medical Council does not take place until May 24th, the Registration of Midwives Bill cannot be submitted for the opinion of the Council until that date; but that under these circumstances the Executive Committee, who have authority to act for the Medical Council, beg to forward for the information of the Lords of the Council the enclosed resolutions, which were adopted by the Council on Nov. 29th, 1889, and on June 5th, 1895, on the Midwives Registration Bill, transmitted by the Lord President on May 16th, 1895, with the request that the Council would favour him with observations on it.'"

The resolutions referred to in the foregoing were:—

1. Moved by Sir JOHN SIMON, and seconded by Sir WALTER FOSTER, and agreed to:—

"That, if any department of Her Majesty's Government were constituted controlling authority in relation to local arrangements made under statute for the licensing and registration of midwives, the Medical Council would, if the Government department so wished, be willing to advise as to the general rules of education, examination, and discipline which ought to be established in the matter; but the Council would not be able to discharge, and would, therefore, not be prepared to undertake, any duties of detail as to the registration of midwives or as to the local arrangements for licensing and controlling them.—Nov. 29th, 1889."

2. Moved by Sir WILLIAM TURNER, seconded by Mr. TEALE, and agreed to:—

"That it should be pointed out that the General Medical Council, as the supervising authority over the Midwives Board, will require to devote each session a portion of its sittings to the business of that Board, and will incur expenses in connexion therewith. As the funds of the Council consist solely of the fees paid by medical practitioners for admission to the Medical Register, it does not seem to be equitable that they should be expended in payment of work to be imposed by statute on the Council in connexion with the supervision of the Midwives Board. Further, the practitioners in Scotland and Ireland would be contributing to pay the expenses of an Act applying only to England and Wales. The Council would point out that as the Bill has been introduced in the interests of the public, and as the midwives are not in a position to pay large fees for purposes of registration, a grant should be made by the Treasury to meet the expenses of the Midwives Board and the additional charges imposed on the Medical Council.—June 5th, 1895."

On the motion of Sir WILLIAM TURNER these several documents were entered on the minutes.

In answer to Dr. Bruce, Sir WILLIAM TURNER stated that no further communication had been received from the Lord President on the subject.

Mr. BROWN said that the communication of the Executive Committee did not reply to the request for an opinion of the Council on Mr. Tatton Egerton's Bill. They should see that the Privy Council were furnished with an opinion, and he therefore moved that the Bill be referred to a committee to consider and report.

Dr. RENTOUL rose to a point of order. A few days ago, he said, he wrote to the President asking if he might send up amendments to the Midwives Registration Bill. The President had replied that it would be out of order to do so, and that the Council would be out of order in considering the Midwives Registration Bill. He wished to know if the President adhered to that view.

As the President did not rise to reply,

Sir W. TURNER said that Mr. Brown's motion was before the Council. Did Dr. Rentoul second it?

Dr. RENTOUL: I want a ruling.

The PRESIDENT said that the General Medical Council would have nothing to do with the Midwives Bill. They had expressed that opinion more than once, and until the former resolution was rescinded the question could not be re-opened.

Sir WILLIAM TURNER said it was usual at the meetings of the Council to put motions in writing. He had not received Mr. Brown's, and it had not been seconded. Would Mr. Brown put his motion in writing?

Mr. BROWN: Will you speak to the chair, sir? I will take my orders from the chair.

Sir WILLIAM TURNER: I am speaking in my official capacity as Chairman of the Business Committee, and I am merely telling you what is the mode of conducting business.

Mr. BROWN: I should take it much more kindly from the President. You should speak to the chair.

Dr. BRUCE seconded the motion. He thought it was the Council's duty in all courtesy to the Privy Council to take this matter into consideration.

The PRESIDENT: You must first move that the previous resolutions of the Council be rescinded.

Dr. GLOVER did not see that there would be anything improper in referring this Bill to a committee. In 1890 there was a Midwives Registration Bill sent to them for their opinion and it was referred to a committee. He had further to remind the Council that that committee went through another Bill sentence by sentence, and passed a series of resolutions which were embodied in the volume of their proceedings for 1895. If they referred Mr. Tatton Egerton's Bill to a committee very possibly the committee would come to the same conclusions as were come to in 1895, and there would be no harm if they did. If Mr. Brown and Dr. Rentoul could satisfy the Council that there was reason for altering the previous resolutions there would be nothing improper done. He hoped there was nothing inconsistent in taking that course, and he should therefore support the proposal to refer the Bill to a committee.

Dr. MACALISTER said he should be sorry if the motion was carried. He was satisfied with the existing resolution. It touched the only two points with which the Council were concerned. To again spend days and days over the subject would be waste of time. Everybody knew that the Bill in question had no chance of passing during this session or of coming up again. It was dead, and that was an additional reason for not seeking to discuss it in the Council.

Dr. MCVAIL said that as a Crown member appointed by the Privy Council he could not take the view of the matter which Dr. MacAlister took. He wished, however, to point out that the Privy Council's request was made on Feb. 16th, and, as they had now reached May 25th, did the Privy Council still desire that the General Medical Council should consider the Bill and give an opinion of it? They should inform themselves on the point before proceeding further. He moved accordingly.

Dr. THORNE THORNE seconded the motion. He was firmly convinced that it would be an absolute waste of time to consider the Bill in question so far as the present session was concerned; but they must remember this, that when the Privy Council asked their opinion on the previous Bill they had spent two whole days in formulating that opinion, and he thought that that fact afforded ample ground for complying with the present request. Still, if they went to the Privy Council now and asked if they were to consider the matter, he thought they would be told that they need not take it into consideration.

Mr. BRUDENELL CARTER agreed that it would be desirable to get the information Dr. McVail suggested, but in writing for it they should point out that the opinions of the Council on the registration of midwives had been already fully laid before the Privy Council in the minutes for 1895.

After some remarks by Dr. HERON WATSON, Mr. BROWN and Dr. BRUCE consented to withdraw their motion, and Dr. McVail's proposal was agreed to in the following form:—

"That inquiry be made as to whether the Privy Council still desires that the Midwives Registration Bill sent on Feb. 16th should be considered during the present session of the Medical Council."

The Council adjourned.

WEDNESDAY, MAY 26TH.

The Council met again to-day with a full attendance of members.

Resignation of the Registrar.

Mr. ALLEN, acting clerk, read a letter from Mr. W. J. C. Miller, intimating that on account of ill health he desired to resign the office of registrar which he had held for a period of twenty-one years.

Sir WILLIAM TURNER said that this letter was before the Executive Committee at its meeting on Monday, and with a view of facilitating the consideration of the situation they had framed the following report, viz.:—

"(*a*) The executive committee recommend the Council to accept Mr. Miller's resignation as from May 31st.

"(*b*) The committee having been advised by Mr. Muir Mackenzie that

the Council is not empowered to grant a pension or supernumerary allowance to any of its officers, but that a gratuity may be awarded on retirement, they recommend the Council to appoint a committee consisting of the two treasurers and of additional members to bring up a report on this subject at the present meeting of the Council. Also that the same committee should report on the steps to be taken as to filling up the vacancy.

"(c) The committee recommend the following members to act together with the treasurers: Mr. Teale, Dr. Heron Watson, Sir Philip Smyly, Sir Wm. Turner."

In moving the adoption of the first recommendation he wished to say that the Council were losing the services of an officer who had been associated with them for upwards of twenty years, and who as long as he was in the full vigour of his health gave his time and his services without grudging to the work of the Council. He thought he might say that all the members held Mr. Miller in the highest respect and regard, and were extremely sorry to think that the state of his health was such that he felt it necessary to resign his appointment. The legal adviser of the Council had assured them that they had no power to confer a pension upon a retired officer, and in the case of Dr. Hawkins the course was adopted which was now suggested—namely, that a gratuity should be given.

Mr. TEALE, in seconding the motion, spoke of Mr. Miller's power as a mathematician and his literary qualities.

Sir JOHN BANKS said he agreed with all that had been said about Mr. Miller, and hoped the Council would be able to treat him with great generosity.

Dr. MACALISTER and Dr. PETTIGREW also spoke appreciatively of Mr. Miller's qualities and services.

Mr. BROWN suggested that the Council might postpone action until the November session, which would in his opinion be the highest compliment they could pay to Mr. Miller.

The recommendation was then adopted by the Council.

Sir WILLIAM TURNER, in moving the second recommendation, said that the President desired that the committee should also report on the range of the duties of the new Registrar and the remuneration to be paid him.

The recommendation thus amended was agreed to, as was also the third recommendation.

On the motion of Sir DYCE DUCKWORTH, seconded by Mr. BRYANT, it was agreed:—

"That in accepting the resignation of the Registrar, Mr. W. J. C. Miller, the Council desire to place on record its high appreciation of his services during his tenure of office for a period of over twenty years, and to express its regret that, owing to failure of health, it is to lose the benefit of his special tact, urbanity, and knowledge."

Penal Removals from the Register.

Dr. HERON WATSON, on behalf of the Executive Committee, presented a modified set of standing orders to regulate the procedure of the Council with reference to penal removals from the Medical Register. These standing orders, he said, would secure continuity and regularity in the proceedings and protect the decisions of the Council. He begged to move their adoption.

Sir DYCE DUCKWORTH, in seconding the motion, said that this would be found a very much improved edition of the standing orders.

Dr. BRUCE said he wished to suggest a small alteration. In one of the standing orders it was ordered that the complaint and the abstract and the documents which accompanied the complaint should be submitted by the General Registrar to the President, who, if the case were considered by him to be outside the jurisdiction of the General Council, might direct the General Registrar to signify the same to the applicant, but who, if the case in his opinion might come within such jurisdiction, should direct the General Registrar to refer the case to the Committee on Penal Cases. He did not think there was any subject with which this Council had to deal in regard to which they should be more careful and deliberate than the subject of penal prosecutions. This was a department of the Council's work in which the direct representatives of the profession were specially interested. They allowed freely enough that the other members of the Council had the highest regard for the honour and dignity of the profession, but the direct representatives coming into contact with the great body of the profession understood what pressure was exerted by such bodies as the Medical Defence Union in order to clear the Register of names that should not be there. He wished particularly to say that he referred to nothing which had taken place in the past. He thought the standing orders, as drawn up by Mr. Muir Mackenzie, were excellent and met their objects thoroughly, although he wished to call attention to this particular point. His desire was that every case which was brought up should be submitted to the Penal Cases Committee as it was proposed to be constituted. He had the highest respect for Sir Richard Quain, but he thought that no individual should be put in a position where he was bound to determine such nice points. He thought every case should, so to speak, go before the grand jury, and that the grand jury in this instance should be the Penal Cases Committee. He therefore proposed that the standing order should read that the complaint, &c., should be submitted to the President, who should direct the General Registrar to refer the case to the Committee on Penal Cases.

Dr. MACALISTER seconded this amendment.

The PRESIDENT said there were cases so absurd and trifling that they should not be sent to the committee.

Dr. RENTOUL said he desired to support the amendment. He thought it essential that the profession should feel the utmost confidence in the Council. Whether rightly or wrongly, he was afraid medical practitioners felt that the Council had somewhat neglected its duties in looking into these matters, and he thought it would be a good thing to have every case referred to the committee. Further than that, he thought the members of the committee should be paid, because unpaid public work was always badly done work.

Mr. BROWN also spoke in support of the amendment.

The amendment was then put to the Council and carried by a large majority, both as an amendment and as a substantive motion.

Dr. BATTY TUKE moved:

"That the Penal Cases Committee consist of five members—three from England, one from Scotland, and one from Ireland; that the committee meet four times a year if necessary; and that the President shall be empowered to summon the committee at other times if he considers that necessity has arisen."

He reminded the Council that cases from Scotland and Ireland were rare.

Dr. BRUCE thought it was not necessary to create a new committee, and suggested that the Executive Committee might take the work in hand with the assistance of the Branch Councils, who would be able to make inquiries locally.

Dr. PETTIGREW shared this view with Dr. Bruce. He thought it would be a good thing if the Scottish Branch Council met oftener.

Mr. BROWN said he should like to see the Branch Council the Penal Committee for its division of the country.

After some further discussion the motion of Dr. Batty Tuke was carried.

It was also agreed, on the motion of Dr. BATTY TUKE:

"That the President be empowered not to summon the Scottish or Irish members of the Committee unless cases forwarded from either of these countries have been presented for consideration.

"That all documents bearing on cases from Scotland or Ireland shall be submitted to their respective representatives on the Penal Cases Committee, who, in consultation with two other members of the Scottish or of the Irish Branch Council, as the case may be, to be appointed annually by the respective Councils, shall send a report to the President of the General Council to be brought before the Penal Cases Committee at the first subsequent meeting.

Some discussion elicited the opinion that the Standing Orders as modified had not been adopted, and two proposals were made—one that each section should be separately considered by the Council, and the other that the whole be gone into in committee. The former proposal was not pressed, and the motion to go into committee was rejected by 16 votes to 11.

Mr. BRUDENELL CARTER, seconded by Sir DYCE DUCKWORTH, thereupon moved that the Standing Orders as amended be adopted.

Dr. MCVAIL proposed an alteration of Article 15, which stood in the programme in the following terms: "In the event of a resolution for adjournment of the further consideration of the charge being carried the Council, on the case coming on again for consideration, may hear the accused practitioner and the complainant (if any), and receive such further evidence as it shall think fit." He moved to leave out the words "and the complainant (if any)," and that the ending of the Article should be, "and to receive such further evidence as the practitioner shall think fit to lay before the Council."

The PRESIDENT said that these were legal technicalities that ought to be discussed only when the Council's legal advisers were present.

Dr. GLOVER agreed with this view.

Mr. BROWN seconded Dr. McVail's proposal.

Mr. BRUDENELL CARTER pointed out that the Article was word for word the same as that which they had been acting upon, and it had worked very satisfactorily, especially in the case of young practitioners who had been led into error. He should be sorry to see it altered.

Dr. CAMERON: Does "practitioner" mean convicted practitioner?

The PRESIDENT: Yes.

The proposal was rejected and the motion for the adoption of the Standing Orders was carried by 18 votes to 2.

A Deputy President.

On the return of the Council after the adjournment for tea,

Sir WILLIAM TURNER intimated that at the request of Sir Richard Quain, and subject to the approval of the Council, he had been asked to take the chair for the rest of the business.

The intimation was received with applause and Sir William Turner presided during the remainder of the sitting.

Dental Business.

Mr. BRYANT, as chairman of the Dental Education and Examination Committee, submitted reports on the qualifying examinations of the four dental licensing bodies of the United Kingdom—viz., the Royal College of Surgeons of England, the Royal College of Surgeons of Edinburgh, the Faculty of Physicians and Surgeons of Glasgow, and the Royal College of Surgeons in Ireland. The committee reported that all these bodies now came up to the approved curriculum. The English and Irish Colleges had deviated somewhat from the original recommendations of the General Medical Council, but these deviations in no way departed from the Council's wishes, since they all tended to make the practical part of the course of study more complete. The committee failed to see the advantages of Scotland having two dental boards, and recommended that the two should unite and form one conjoint board, so that there would be but one dental licensing body in each division of the United Kingdom. The reports embodied modifications of the existing regulations as to the course of study and examinations to be gone through by candidates for licences in dental surgery.

On the motion of Mr. BRYANT, seconded by Mr. BRUDENELL CARTER, the reports were entered on the minutes. On the question whether the Council should go into committee to consider the various recommendations in detail,

Dr. HERON WATSON expressed the opinion that before they went into committee on the admirable reports that had been presented the Council should consult the licensing bodies concerned on the subject, with the view of carrying these bodies with them in the decisions they might come to. The time that would be spent in doing that would very likely ultimately prove a gain. He moved that the reports be sent down to the bodies with an invitation to them to express an opinion on the recommendations in time to have the same laid before the Council previously to decision upon them at the November session.

Dr. BRUCE seconded the motion.

Dr. McVAIL drew attention to the recommendation that the Scotch bodies should unite. He said they had no power under the Dentists Act to do so.

Mr. BRUDENELL CARTER and Dr. RENTOUL pointed out that Section 38 of that Act empowered them to do so.

The motion was agreed to, and the Council adjourned.

PRESENTATIONS TO MEDICAL MEN.—Presentations have been made by members of the local ambulance classes in recognition of honorary instructions in First Aid as follows: to Mr. J. F. C. Hossack, F.R.C.S. Edin., of Ipswich, of a meerschaum pipe; to Mr. R. E. Brown, L.R.C.P., L.R.C.S. Edin., of Willington, Durham, of a silver-mounted walking-stick; to Mr. W. S. Anderson, M.D. Glasg., M.R.C.S. Eng., of Chapel-en-le-Frith, Derbyshire, of a medical work, and to Mr. V. J. Greenhough, M.B. Cantab., also of Chapel-en-le-Frith, of a telescope; to Mr. P. Phelps, L.R.C.P. Edin., M.R.C.S. Eng., of Loughborough, Leicestershire, of a dressing-case; to Mr. W. F. Boycott, M.B. Edin., of Manchester, of a gold medal and a walking-stick; and to Mr. S. McC. Boyd, F.R.C.S. Irel., of Manchester, of a handsome walking-stick.

Medical News.

SOCIETY OF APOTHECARIES OF LONDON.—At the Examination in May the following candidates passed in the subjects indicated:—

Surgery.—A. Avent, St. George's Hospital; M. I. Baker, St. George's Hospital; S. R. Bhagtani, King's College Hospital; P. H. Collingwood, St. Thomas's Hospital; R. B. Greaves, Sheffield; A. J. Hull (Section I. and II.), Guy's Hospital; J. S. A. Murphy, Leeds; H. R. Rice, London Hospital; and G. Steel, Cambridge.

Medicine.—F. Adams, St. Thomas's Hospital; H. A. Ahrens, King's College Hospital; J. Ash, St. Thomas's Hospital; A. J. Hull (Section I. and II.), Guy's Hospital; R. A. Lewty, Leeds and St. Mary's Hospital; B. S. Mankar, London Hospital; and J. S. A. Murphy, Leeds.

Forensic Medicine.—T. M. Clayton, Durham; A. J. Hull, Guy's Hospital; R. A. Lewty, Leeds and St. Mary's Hospital; H. H. Monckton, King's College Hospital; C. W. Moore, Manchester; and F. M. Simmonds, Edinburgh.

Midwifery.—F. M. Aldred, Liverpool; C. H. Church, McGill; T. M. Clayton, Durham; G. J. D. Davies, Leeds; C. W. Moore, Manchester; H. R. Rice, London Hospital; and F. M. Simmonds, Edinburgh.

The diploma of the Society was granted to the following candidates, entitling them to practise Medicine, Surgery, and Midwifery.—Messrs. Avent, Baker, Church, Clayton, Greaves, Hull, Moore, Murphy, Rice, and Simmonds.

UNIVERSITY OF LONDON.—At the M.B. Pass Examination in May the following candidates were successful:—

First Division.—Richard Hamilton Ashwin, Guy's Hospital; Stanley Longhurst Box, St. Bartholomew's Hospital; Harold Merriman Cooper, St. George's Hospital; Arthur Henry Evans, Westminster Hospital; George Frederick Saunders Genge, Westminster Hospital; Cuthbert Henry Jones Lockyer, Charing-cross Hospital; Raghavendra Row, B.Sc., Grant Medical College, Bombay, and University; and Frederick Charles Sprawson, King's College Hospital.

Second Division.—Percy Crompe Barford, St. Bartholomew's Hospital; William Blair Bell, King's College Hospital; Robert Allan Bennett, Mason College and Queen's Hospital, Birmingham; John Francis Bill, St. Bartholomew's Hospital; Malcolm Cameron, London Hospital; John Samuel Chater, St. Bartholomew's Hospital; William Wheelwright Clegg, Yorkshire College and Middlesex Hospital; John Morton Sim Coutts, University College; Edmund Sprague Dukes, Guy's Hospital; Arthur Earnshaw, Guy's Hospital; Edward Fisk, Guy's Hospital; Ella Catherine Flint, London School of Medicine and Royal Free Hospital; Herbert Fox, Middlesex Hospital, Glasgow Infirmary, and University of Aberdeen; Fred Claude Bromley Gittings, Middlesex Hospital; John Crisp Griffiths, B.Sc., Mason College, Queen's Hospital, and General Hospital, Birmingham; Ernest Wm. Hey Groves, B.Sc., St. Bartholomew's Hospital; William Hardcastle, Charing-cross Hospital; Sarah Kaye, London School of Medicine and Royal Free Hospital; Urania Latham, London School of Medicine and Royal Free Hospital; William Liversidge, University College; James Laidlaw Maxwell, St. Bartholomew's Hospital; Julius Moore, Guy's Hospital; Percy Northcote, St. Thomas's Hospital; John Owen, Royal Infirmary, Liverpool; Harold Everett Pace, London Hospital; William Redpath, St. Thomas's Hospital; Francis Montgomery Seal, University College; Stanley Francis Smith, St. Bartholomew's Hospital; Harold Weeks, St. Bartholomew's Hospital; and Stanley Whicher, Guy's Hospital.

ROYAL COLLEGE OF SURGEONS IN IRELAND: FELLOWSHIP EXAMINATIONS.—The following candidates having passed the necessary examination have been admitted Fellows of the College:—

H. J. Flanegan, L.R.C.S. Irel., &c.; G. W. Joyce, L.R.C.S. Irel., &c.; and J. R. Wallace, L.R.C.S. Edin., &c.

The following candidates passed the primary part of the examination:—

G. W. Little; J. M'Donald; H. G. Martin, L.R.C.S. Irel., &c.; D. P. O'Brien, L.R.C.S. Irel., &c.; and H. J. C. Wallace.

FOREIGN UNIVERSITY INTELLIGENCE.—*Amsterdam:* Dr. S. Mendes da Costa has qualified as *privat-docent* of Dermatology and Diseases of the Urinary System.—*Basle:* Dr. A. Gönner, *privat docent* in Midwifery, has been appointed Extraordinary Professor.—*Berlin:* The title of Professor has been granted to Dr. E. Grawitz, *privat-docent* of Internal Medicine.—*Beyreuth* (*French Faculty*): Dr. J. la Bonnardière, of Lyons, has been appointed Professor of Therapeutics and Hygiene, in succession to the late Dr. Boyer.—*Bonn:* Dr. Edmund Hummelheim has qualified as *privat-docent* of Ophthalmology.—*Breslau:* Dr. Conrad Alexander, *privat-docent* of Internal Medicine, has been appointed Extraordinary Professor.—*Budapest:* Dr. Thomas von Marschalkó has qualified as *privat-docent* of Dermatology and Syphilography.—*Erlangen:* Dr. Gustav Specht has been appointed Extraordinary Professor of Psychiatry; Dr. Ludwig

Heim, *privat-docent* in Würzburg has been appointed Extraordinary Professor of Hygiene and Bacteriology.—*Halle:* Dr. Vahlen has qualified as *privat-docent* of Physiological Chemistry and Pharmacology.—*Kazan:* Dr. Bodbielski has qualified as *privat-docent* of Pathological Anatomy.—*Leipzig:* Dr. M. Siegfried has been appointed Extraordinary Professor of Physiological Chemistry; Dr. Dolega has qualified as *privat-docent* of Internal Medicine.—*Munich:* Dr. Hermann Dürck, Assistant in the Pathological Institute and Prosector in the City Hospital, has qualified as *privat-docent* of Pathological Anatomy.—*Rostock:* Dr. Ricker, formerly Assistant in the Pathological Institutes of the Universities of Zurich and Halle, has qualified as *privat-docent* of Pathological Anatomy and Bacteriology.—*St. Petersburg (Military Medical Academy):* Dr. B. Tarnovski, the well-known syphilologist, is retiring from his professorship after thirty-five years' service.—*Würzburg:* Dr. Wilhelm Reubold, Extraordinary Professor of Forensic Medicine, has retired, being seventy years of age.

THE HOSPITAL FOR EPILEPSY AND PARALYSIS, REGENT'S PARK.—The annual meeting of this hospital was held on May 19th. The Bishop of Stepney, speaking from the chair, emphasised the fact that the lease of the building at present occupied would expire in three years, and he strongly urged upon the committee the need of a new building which, according to the annual report, would cost from £10,000 to £15,000. He hoped that this difficulty would eventually prove to be a stepping-stone to a higher success. At the same time, he felt that it would be almost hopeless to commence such a fund during the present year, in which funds of all kinds and expenditure, unusual both in character and extent, were becoming almost universal. The Prince of Wales's Hospital Fund, excellent in its aims, must, he knew, cause great anxiety to hospital managers in its general effect upon the subscribing public and upon the Hospital Sunday Fund. The Rev. F. K. Povah, Honorary Chaplin to the hospital, said that according to the published figures, when construed in the most liberal manner, the Prince of Wales's Fund did not reach £40,000 a year, the total of an average Hospital Sunday collection. Mr. J. R. Diggle encouraged the committee to face the evident necessity for a new building. Mr. Pearce Gould, honorary surgeon to the hospital, reminded the meeting that it was at this hospital that the first operation for the removal of a tumour of the brain had been performed on the living subject, and asserted that a modern building was a necessity from the point of view of the staff, no less than in the interests of the patients.

ANNUAL MEETING OF THE BRITISH MEDICAL TEMPERANCE ASSOCIATION.—The twenty-first annual meeting of this association was held on Monday last at the rooms of the Royal Medical and Chirurgical Society, Hanover-square. The newly-elected President, Dr. Sims Woodhead, took the chair. The honorary secretary, Dr. J. J. Ridge, read the annual report, which showed that there had been an addition of 31 members (abstaining practitioners) during the year, and of no less than 217 medical students, making a total of 453 members and 309 student associates. Of the new associates 79 were connected with English schools of medicine, 135 with Scottish, and 3 with Irish. The official organ of the association, the *Medical Pioneer*, had been sent gratuitously to upwards of 2000 medical men for a period of three months. The prize offered to medical students for the best essay on the Influence of Alcohol on Digestion and Nutrition had been awarded to Mr. J. R. Frost, of University College, Bristol. After other business, Dr. Sims Woodhead delivered a presidential address on the Influence of Medical Men on the Temperance Movement. He pointed out that this was exercised long before the modern extension begun by the seven men of Preston. Even Celsus in many passages spoke of the diseases produced by wine and of the advantages of forbidding it. He had found it impossible to include all the work of medical men in promotion of temperance even in modern days in the compass of an address. It was generally recognised not only that alcohol produced many diseases, but that it was a frequent cause of death by aggravating the symptoms of other diseases; it was also known that the excessive use of alcohol greatly increased mortality. It was impossible to discover any definite line of demarkation between the physiological and pathological action of alcohol. He believed that medical men could do even more than legislators to promote the cause of temperance.—Dr. Morton, Dr. Norman Kerr, Dr. Heywood Smith, Dr. Poole, Mr. W. S. Eccles, Mr. W. McAdam Eccles, and Mr. W. F. Hazel took part in the proceedings.

PROPOSED NEW HOSPITAL FOR WESTBURY.—The idea of commemorating the Diamond Jubilee by the erection of a cottage hospital at Westbury, Wiltshire, has been energetically taken up, and last week it was announced that £400 had been promised towards its erection and £70 to the maintenance fund. Mr. W. H Laverton has given a site, £100, a yearly subscription of £20, and 15,000 bricks.

THE PONTYPRIDD BOARD OF GUARDIANS AND POOR-LAW RELIEF.—At the meeting of the Pontypridd board of guardians, held on May 19th, Mr. Bircham, the Local Government Board inspector, attended, and stated that the board had spent in 1896 the sum of £22,000 in relief of the poor and £10,000 in the working of the board, making a total of £32,000. He suggested that in the future no relief should be given to any new applicant without the fullest inquiry.

DEATH OF THE FOUNDER OF THE THIRSK HOSPITAL.—Mrs. Lambert was found dead in bed at Sowerby, Thirsk, last week. She was seventy-six years of age, and founded the Cottage Hospital at Thirsk in memory of her late husband, who was for many years in practice there as a medical man. Mrs. Lambert was a well-known and much-respected lady, and her loss will be felt by a large circle of friends.

SOUTH-WEST LONDON MEDICAL SOCIETY.—A meeting of this society was held at the vestry-room, Wandsworth, on May 12th. In the absence of the President the chair was taken by Surgeon-Major Mark Robinson.—A paper was read by Mr. T. S. Howell, entitled "The Welfare of the General Practitioner."—Having referred to the fact that this year was the diamond jubilee of his entrance into the profession, Mr. Howell dwelt upon the importance to the practitioner of retaining his proper duties in his own hands and not delegating them to others. Stress was laid upon the advantage to medical men of dispensing their own medicines and upon the evil of allowing the modern race of nurses too free a hand in dealing with patients.—A discussion followed, in which Mr. Richard Oram, Mr. Hugh Ker, Mr. M. G. Biggs, Mr. W. G. Dickinson, and others took part.

AN UNREGISTERED DENTIST FINED.—Before the Stipendiary at the Brighton Borough Bench on May 18th an adjourned summons was heard against one Moss Harris for using the title of "dentist" contrary to the provisions of the Dentists Act, 1878. The hearing of the case had been adjourned pending an application in the High Court for a *mandamus* to compel the General Medical Council to place the names of several gentlemen on the Dentists Register. A *mandamus* was refused. For the defence it was urged that Mr. Harris commenced to practise about twenty-five years ago, some years previously to the passing of the Dentists Act of 1878. Mr. Harris did not apply before Aug. 1st, 1879, to have his name put on the Register, and consequently lost his right to be registered. When he did apply the General Medical Council said in effect: "As far as we can see we should have put you on had you applied in time, but we must draw the line somewhere, we can't be putting people on for ever and ever." It was contended also that there was nothing in the Act to prevent a person practising dentistry, though unregistered, so long as he did not use words implying that he was a dental practitioner or a registered dentist. That merely applied to the theoretical portion of dentistry which was concerned with the management of teeth, and did not apply to the most important branch of defendant's work, the making of teeth. The Stipendiary said there must be a conviction. He did not wish to express any opinion as to whether the word "dentist" was or was not in the shop window as stated in evidence, but there was no doubt that other words amply and strongly calculated to cause anyone to think he did claim for himself the title of dentist and was specially qualified to practise dentistry were used. An attempt had been made to separate the functions of dentistry, but he did not think it was possible to do so. A fine of £5 was imposed, four guineas being also allowed as solicitor's costs, and £1 1s. 6d. as court fees; or in default, twenty-one days' imprisonment with hard labour.

THE ROYAL BERKS HOSPITAL, READING.—At a special meeting of the court of governors of this institution the members of the firm of Messrs. Huntley and Palmer were elected vice-presidents of the hospital in recognition of their recent gift of £7000 for the endowment of beds. This well-known firm have always been most liberal supporters of the hospital, and the compliment which has been conferred upon them is well deserved.

MUNIFICENT GIFT TO ROCHDALE INFIRMARY AND DISPENSARY.—The proposal to celebrate the Queen's reign by increasing the endowment of this institution has been met with a most generous gift from the trustees of the late Mr. James Holden, of High Birch, Marland. A grant of £18,000 has been made to the Infirmary governors, with which to endow the new wing of the building. With the £2000 which was specifically left by Mr. Holden to the Infirmary, the additional grant now made brings the total amount by which the institution benefits up to the sum of £20,000. The total sum now promised to the Endowment Fund is not far short of £23,000.

UNIVERSITY OF DURHAM.—The present and past medical students of the University of Durham entertained Professor Philipson and Professor Arnison at a complimentary dinner last week at Newcastle-upon-Tyne. After dinner a beautiful silver bowl, suitably inscribed, was presented to each of them by one of the most recent graduates, Mr. Patterson, M.B., a distinguished student of the school. Both Dr. Philipson and Dr. Arnison replied to the kind and touching allusions made by Mr. Patterson to their long connexion with the infirmary, and expressed their regret at having to terminate their connexion with the students as clinical teachers.

THE DEVON AND EXETER HOSPITAL.—The annual meeting of this institution was held on May 20th, under the presidency of Mr. A. M. H. Walround. The report stated that during the year 1611 patients had received treatment as against 1621 in 1895-96; the number of out-patients treated during the year was 4212; 817 in-patients were discharged and became out-patients and 161 remained in the hospital on Lady Day, 1897. The average daily number of in-patients was 152 as against 160·3, the average cost of each patient being £5 17s. 9d. and the total cost per bed £40 9s. 7½d. The income for the year was £7306 2s. 7d. and the expenditure £8662 3s. 1d. leaving a deficiency of £1356 0s. 6d. The private nursing staff continued to be more than self-supporting, the earnings for the past year having exceeded those of 1895-96 by £45. The demand for the services of the nurses had even been greater, and abundant testimony of the appreciation of their work had been given.

WHITSUNTIDE HOLIDAY ARRANGEMENTS: WHITSUNTIDE ON THE CONTINENT.—For the convenience of visitors to the Brussels Exhibition cheap tickets available for a week will be issued *viâ* Harwich and Antwerp. The Great Eastern Railway Company's Brussels Service has been accelerated, and passengers leaving London in the evening and the North and Midlands in the afternoon reach Brussels next morning after a comfortable night's rest on board the steamer. For visiting the Hague, Amsterdam, and other parts of Holland, the Rhine, North and South Germany, and Basle for Switzerland, special facilities are offered *viâ* the Company's Harwich, Hook of Holland route, through corridor carriages being run to Amsterdam, Berlin, Cologne, and Basle from the Hook of Holland. The General Steam Navigation Company's fast passenger steamers *Peregrine* and *Seamew* will leave Harwich on June 2nd and 5th for Hamburg, returning on June 6th and 9th.

UNIVERSITY OF CAMBRIDGE.—The proposal to confer the title of B.A. upon women was on May 21st rejected by the unprecedented majority of 1707 to 661 votes. It is hoped that the vexed question will, after this unmistakeable expression of hostile opinion, be allowed to rest. The way is now open for a solution of another kind which will involve no interference with the present constitution of the University. The simplest plan would undoubtedly be the acquisition by Newnham and Girton Colleges of power to confer degrees on duly qualified women. The facilities for instruction and examination now freely afforded by the University might continue unchanged, but the duty of giving an academic title to women would be reserved for the institutions which are best fitted to guide and control them.—The Rede Lecture on Recent Researches in Terrestrial Magnetism will be delivered by Professor A. W. Rücker in the Senate House at noon on Wednesday, June 9th.—A special class in Practical Histology will be held in the Long Vacation by the Master of Downing (Dr. Hill) and Dr. Barclay-Smith, beginning on July 6th.—The General Board of Studies propose to establish a University lectureship in Experimental Psychology, including the Physiology of the Senses. The appointment will probably be made before the end of the present term. Dr. Rivers, of St. John's College, is already conducting two highly successful classes in the subject at the Physiological Laboratory, and will probably be appointed to the lectureship.

Parliamentary Intelligence.

NOTES ON CURRENT TOPICS.

The London Water Question.

THE Government, in fulfilment of its promise to do something this session to strengthen the position of the ratepayers in London with reference to the Water Companies, has introduced a Bill enabling individual ratepayers and local authorities to take complaints with reference to the water-supply before the Railway and Canal Commissioners. It is not intended that this power shall interfere in any way with the existing power of making complaint to a magistrate or the Local Government Board.

Infant Life Protection Bill.

The following clause has been added to the Infant Life Protection Bill, namely:—"Any person retaining or receiving an infant under the age of two years on consideration of a sum of money not exceeding £20 paid down, and without any agreement for further payment, as value for the care and bringing up of the said infant until it is reclaimed or of an age to provide for itself, shall within forty-eight hours from the time of receiving such infant give notice of the fact to the local authority. If he does not give the notice required by this section, he shall be liable to forfeit the amount of any sum received by him in respect of such infant, or such less sum as the Court having cognizance of the case shall deem just, and the Court shall give directions as to the manner in which the sum forfeited shall be applied for the benefit of the infant, and shall, if necessary, cause the infant to be removed to a workhouse or place of safety, and the master of such workhouse shall receive such infant, which shall be maintained in the workhouse or place of safety until it can be otherwise lawfully disposed of."

Compensation for Injury to Health.

Before entering upon the Committee stage of the Workmen (Compensation for Accidents) Bill the House of Commons on Monday, May 24th, engaged in an interesting debate on the point whether the Bill should be extended so as to give compensation to workmen for injuries to health arising out of, and in the course of, their employment. Mr. Tennant, who proposed that it should be so extended, gave some account of the excessive mortality among file makers and of the frequent cases of lead-poisoning. He told how, in the case of the Newcastle Infirmary alone during the seven years since 1890 no fewer than 228 cases of lead-poisoning were admitted, of which 107 ended in death. A girl, aged seventeen years, employed for three years in the lead process, had to go to hospital for lead-poisoning, and left almost totally blind. Another girl, of the same age and in the same employment, was attacked with partial paralysis, and after twelve months in hospital was discharged, but with the loss of her sight. Representations had been made to her employers, but nothing had been done for her. Another girl, aged eighteen years, who had been employed in the lead process since January, 1896, was seized with a fit in the January of this year, and had now been discharged from hospital with the loss of sight in one eye and with her general health so impaired that she could not hope ever to be able to work again. The Government, while expressing sympathy with the proposed extension of the Bill, said it would greatly complicate the measure and make it extremely difficult to pass, and on these grounds resisted it. On a division the proposal was rejected by 233 to 144 votes.

HOUSE OF COMMONS.

THURSDAY, MAY 20TH.

Medical Examination of Letter Sorters.

Mr. Lough asked the Secretary to the Treasury, as representing the Postmaster-General, whether, whereas under the Tweedmouth Report only two medical examinations were required for men on probation for appointment to sorterships, many who had already passed two examinations were now required to pass a third; and whether, if this were so, the Postmaster-General would see his way to remove this obligation in the case of existing probationers.—Mr. Hanbury replied that the

Tweedmouth Committee recommended that the probationary period of two years with three medical examinations should be reduced to one year with two medical examinations, one at the beginning and the other at the end of the period. Under the old system the intermediate examination was not quite so stringent as the other two, and the Postmaster-General feared that it would not be possible to regard it as satisfying the requirements which the Tweedmouth Committee had in view. All concerned would therefore still have to undergo the final examination which was necessary before the appointments could be confirmed, but the probationers who had not passed the intermediate examination would, of course, be relieved from the obligation of undergoing it.

FRIDAY, MAY 21ST.

Death in a Workhouse.

Mr. Crilly asked the President of the Local Government Board if he could now inform the House as to the result of his inquiries respecting the death of the old woman, Margaret Ross, upon whose body an inquest was held in the Hackney Coroner's Court on May 3rd, when it appeared in evidence that the deceased had been an inmate of a City union workhouse, that her age was seventy-seven years, and that she had been found dead on the previous Thursday beside the washing pail which she had been using in her work, and that the workhouse authorities had been in the habit of compelling this old woman to clean out a large ward containing twelve beds.—Mr. Chaplin replied that he had been in communication with the guardians of the City of London on this subject, and he had also obtained copies of the depositions taken at the inquest in the case. It appeared from the medical evidence and a post-mortem examination that the death of the poor woman was instantaneous—from natural causes, and due neither to syncope nor weakness. It was not the case that the workhouse authorities compelled her to clean out a ward. She had, up to some nine days before her death, been employed in the needle-room, and it was at her own special request that she was allowed to undertake the duty of keeping a dormitory clean, as she preferred this to the more sedentary work, and she was quite capable of undertaking it.

The Form of Oath Administration.

Sir Walter Foster asked the Attorney-General if his attention had been called to the growing fear of infection attaching to the ordinary form of English oath as administered in courts of justice, and whether it was the intention of the Government to introduce a Bill to alter the ordinary form of English oath, and to abolish the objectionable practice known as kissing the book in the administration of oaths of all descriptions.—The Attorney-General (Sir Richard Webster) said that his attention had been called to the question of the desirability of changing the form of oath. He thought the fear of infection had been somewhat exaggerated. Under the provisions of the Oaths Act of 1888 witnesses were now permitted to take the oath in the Scotch form in which it was unnecessary to kiss the book. He would, however, consider whether any further amendment of the law was required.

Workhouse Administration in Ireland.

In the course of a debate on the vote for the expenses of the Local Government Board in Ireland Mr. Gerald Balfour, Chief Secretary, said he was not satisfied with the workhouse system in Ireland, and he had brought in a Bill thoroughly to reform it. Unfortunately, however, it would not be possible to pass it during the present session. At the same time he hoped sooner or later to see an amalgamation of unions, which would be likely to form the best foundation for workhouse reform in other directions. He had included in his Bill the adoption of the system of boarding out pauper children.

MONDAY, MAY 24TH.

Lead Poisoning.

Mr. M'Kenna asked the Secretary of State for the Home Department whether his attention had been called to the case of James A. Garvey, aged seventeen, a lead filer, lately employed at the Electrical Power Storage Company's works, Millwall, who died recently from the effects of lead poisoning; whether he was aware that there was only one bath at the works at which from forty to fifty boys were employed, and that the regulation compelling the use of the bath was habitually disregarded; and whether he proposed to take any steps under the circumstances.—Sir Matthew White Ridley replied that his attention had been called to this case, but he was unable to find on inquiry that there had been any breach of the Factory Acts or the special rules which had been made for electric accumulator works. Employers were required by those rules to provide a bath; this was done at the works in question and a time for bathing appointed for each person employed. It was not obligatory at present, however, on the workers to use the bath, and he regretted to find that at these works bathing had often been omitted. It might become necessary to take steps to remedy this.

Death Certification.

Mr. Macdona asked the Secretary of State for the Home Deparment whether his attention had been drawn to the statement made by the London Association for the Prevention of Premature Burial in THE LANCET of April 24th[1], that in England and Wales 16,000 persons were annually buried without medical certificates of any sort; and whether the Government would take the matter into its serious consideration so as to prevent as much as possible persons being prematurely buried. Sir Matthew White Ridley said he had not seen the statement to which the honourable member alluded, but it was not the case that 16,000 persons were buried annually without medical certificates. The number of uncertified deaths in 1896 was 11,464, and there had been a steady decrease for many years past, both in the actual number of such deaths and in the proportion which they bore to the total number of deaths. No cases of premature burial had been brought to his notice, nor was he aware that it was a matter which fell within his jurisdiction, but in any case he was unable to see that the obtaining a certificate of death would be a guarantee against a premature burial taking place.—Mr. Macdona asked the right hon. gentleman whether he was not aware that a number of medical men were of opinion that a great number of people were buried prematurely.—Sir Matthew White Ridley said in reply to this that the certificates were given by members of the medical profession. Therefore it followed that in their opinion the persons in regard to whom the certificates were given were dead.

Treatment of Weak and Sick Prisoners in Scotland.

Mr. Hedderwick asked the Lord Advocate whether, under the present prison system of Scotland, imbecile or weak-minded prisoners were associated in cells with other criminals without the personal supervision either of officers or hired attendants, whose duty it should be to see that such prisoners were not maltreated; whether sick prisoners were left to the care of fellow-criminals who were wholly without experience in the treatment of invalids; whether evidence showing that these practices prevailed was given in November last by a number of medical men holding appointments in connexion with prisons in Scotland; and whether, in view of the fact that such practices had been condemned by Commissioners of Prisons and abolished both in England and Ireland, he would undertake at an early date to endeavour to assimilate the prison system of Scotland in these particulars to the more humane modes of treatment obtaining in England and Ireland.—The Lord Advocate said he was informed by the Prison Commissioners for Scotland that when weak minded prisoners were associated on medical grounds they were under the close inspection of prison officers who were responsible that no prisoner was maltreated, but that all were properly cared for, and by the rules the medical officer had to satisfy himself that the arrangements were effective; the sick prisoners were not left to the care of fellow-criminals, and that no record could be found of any evidence given by prison medical officers in November last regarding the care of the sick. The Prison Commissioners were satisfied that the treatment of the sick prisoners was humane, and they had always directed their special attention to this part of prison administration.

Irish Schools and Epidemics.

Mr. Carew asked the Chief Secretary to the Lord-Lieutenant of Ireland whether he was aware that in Ireland the sanitary authority had no power to have schools closed for the protection of public health in the case of epidemics breaking out, while in England the sanitary authority had such power conferred upon it, and would the Government extend the same salutary protective power to Ireland.—Mr. Gerald Balfour said, in reply, that the facts were correctly stated in the first part of the question, though in England the managers of a school might appeal to the Education Department if they considered the notice requiring the school to be closed unreasonable. He should not like to answer the second part of the question without having an opportunity of consulting the Commissioners of National Education and taking their views.

TUESDAY, MAY 25TH.

The Vaccination Question.

Sir William Priestley asked the President of the Local Government Board whether he was able to say what course he proposed to take in consequence of the recommendation of the Royal Commission on Vaccination as to the lymph-supply to be issued in future by the National Vaccine Establishment.—Mr. T. W. Russell made the following reply on behalf of Mr. Chaplin: Shortly after the issue of the Report of the Royal Commission on Vaccination, I issued fresh instructions to public vaccinators by which they are enabled, whenever they deem it desirable, to use calf lymph instead of humanised lymph. I have also been making inquiries abroad as to the preparation and employment of glycerinated calf lymph. The report on this subject has been delayed by reason of the fact that in some Continental countries public vaccination is practically suspended during the winter months, and is only resumed in May. But from the information already before me it is more than probable, in my opinion, that glycerinated calf lymph will be found to present distinct advantages over other forms of vaccine lymph, and one of the points which I shall have to consider will be how far it may be practicable for me to issue a gratuitous supply of vaccine lymph in this form to all registered medical practitioners applying for it. I shall also have to consider how far any considerable change, such as is indicated, in the form or the extent of the lymph-supply from the National Vaccine Establishment will be practicable pending fresh legislation on the whole question.

[1] Our words were: "It is computed that in England 15,000 persons are annually interred without medical evidence of any sort."—ED. L.

BOOKS, ETC., RECEIVED.

BAILLIÈRE, J. B., ET FILS, Paris.

Thérapeutique du Paludisme. Par F. Burot et M. A. Legrand. 1897.

Chirurgie des Centres Nerveux. Par Dr. L. Glantenay. 1897.

BAILLIÈRE, TINDALL, AND COX, King William-street, Strand, London.

Chlorosis: The Special Anæmia of Young Women. Its Causes, Pathology, and Treatment. By E. Lloyd Jones, M.D., B.C. Camb. 1897. Price 2s. 6d.

Excretory Irritation and the Action of Certain Internal Remedies on the Skin. By D. Walsh, M.D. Edin. 1897. Price 3s. 6d.

CARRÉ, G., ET NAUD C., Paris.

Manuel d'Ophtalmologie. Par Dr. E. Fuchs. Deuxième edition Française. Par Dr. C. Lacompte et Dr. L. Leplat. 1897.

La Technique des Rayons X. Par A. Hébert. 1897.

CHATTO AND WINDUS, Piccadilly, London.

A History of Our Own Times, from 1880 to the Diamond Jubilee. By Justin McCarthy, M.P. 1897. Price 12s.

CLAY, WM. F., Teviot-place, Edinburgh.

Practical Handbook of the Diseases of the Eye. By D. C. Watson, M.B., C.M. Illustrated. 1897.

Reports from the Laboratory of the Royal College of Physicians, Edinburgh. Edited by J. B. Tuke, M.D., and D. N. Paton, M.D. Vol. VI. 1897. Price 8s. 6d. net.

CHURCHILL, J. & A., Great Marlborough-street, London.

A System of Dental Surgery. By the late Sir John Tomes, F.R.S. Fourth edition Revised by Chas. S. Tomes, M.A., F.R.S. Illustrated. 1897. Price 16s.

A Short Practice of Midwifery. By H. Jellett, B.A., M.D., B.Ch. Dub., with a Preface by W. J. Smyly, M.D., F.R.C.P. Irel. Illustrated. 1897. Price 6s.

A Practical Treatise on Mechanical Dentistry. By Jos. Richardson, M.D., D.D.S. Seventh edition. Revised by Geo. W. Warren, D.D.S. Illustrated. 1897. Price 22s.

The Deformities of the Fingers and Toes. By William Anderson, F.R.C.S. 1897. Price 6s.

DAVIS, THE F. A., COMPANY, Philadelphia.

Diseases of the Ear, Nose, and Throat, and their Accessory Cavities. By S. S. Bishop, M.D., LL.D. Illustrated. 1897.

DOIN, O., Paris.

Leçons de Clinique Médicale, Psychoses et Affections Nerveuses. Von G. Ballet. 1897.

FISCHER, GUSTAV, Jena.

Die Serumbehandlung der Diphtherie. Von Dr. F. Ganghofner. 1897.

Handbuch der Anatomie. Von Dr. Karl von Bardeleben. 1897. 7 Band; 4 Lieferung.

Chirurgische Operationslehre. Von Dr. Th. Kocher. Dritte Auflage. 1897.

Mitteilungen aus der Grenzgebieten der Medizin und Chirurgie. Redigiert von J. Mikulicz und B. Naunyn. Erster Band. Funftes Heft. 1896.

Die Schwerhörigkeit durch Starrheit der Paukenfenster. Von Dr. R. Panze. 1897.

GRIFFIN, CHAS., AND COMPANY, Exeter-street, Strand, London.

Year-book of the Scientific and Learned Societies of Great Britain and Ireland. Compiled from official sources. 1897. Fourteenth annual issue. Price 7s. 6d.

HARISON, WM. B., New York.

Manual of Static Electricity in X Ray and Therapeutic Uses. By S. H. Mouell, M.D. Illustrated. 1897.

IDEAL PUBLISHING UNION, Farringdon-street, London.

Vegetarian Jubilee Library. The Return to Nature. By J. F. Newton. 1897.

KEGAN PAUL, TRENCH, AND CO., Charing-cross-road, London.

Retinoscopy (or Shadow Test) in the Determination of Refraction at One Meter Distance with the Plane Mirror. By Jas. Thorington, M.B. Illustrated. 1897. Price 5s.

LONGMANS, GREEN, AND CO., Paternoster-row, London.

Exercises in Practical Physiology. By A. D. Waller, M.D., F.R.S. Part 3. Physiology of the Nervous System. Electro-physiology. 1897. Price 2s. 6d. net.

MOHR, J. C. B., Freiburg i. B. und Leipzig.

Denkschrift zur Einweihung des hygienischen Instituts der Universität Freiburg i. B., am 9 Januar, 1897. Von Professor Dr. Max Schottelius.

PUTMAN'S SONS, G. B., Bedford-street, Strand, London.

Hypnotism and its Application to Practical Medicine. By Otto Georg Wetterstrand. Translated by H. G. Petersen, M.D. 1897. Price 10s.

RIVINGTON, PERCIVAL, AND CO., King-street, Covent-garden, London.

Some Aspects of Infantile Syphilis. Being the Hunterian Lectures delivered at the Royal College of Surgeons in 1896. By J. A. Coutts, M.B. Cantab., M.R.C.P. 1897. Price 3s. 6d.

SMITH, ELDER, AND CO., Waterloo-place, London.

Nervous Affections of the Hand and other Clinical Studies. By G. V. Poore, M.D., F.R.C.P. 1897. Price 7s. 6d.

SOCIÉTÉ D'EDITIONS SCIENTIFIQUES, Paris.

Études Épidémiologiques. Le Choléra en Europe, depuis son origine jusqu'à nos jours. Par Dr. Ph. Hauser. 1897.

STOCK, ELLIOT, Paternoster-row, London.

Natural History in Shakespeare's Time. By H. W. Seager, M.B. 1896.

UNIVERSITY PRESS, Cambridge.

Cambridge Natural Science Manuals: The Vertebrate Skeleton. By S. H. Reynolds, M.A. 1897.

UNIVERSITY PRESS, John-street, Bedford-row, London.

The Blight of Respectability: An Anatomy of the Disease and a Theory of Curative Treatment. By Geoffrey Mortimer. 1897. Price 2s. 6d.

VOGEL, F. C. W., Leipzig.

Zur Pathologie und Therapie der Kindlichen Skoliose. Par Dr. Dolega. 1897.

WILLIAMS AND NORGATE, Henrietta-street, Covent-garden, London.

Über Puerperale Psychosen. Von Dr. O. Knauer. Mit einem Vorwort von Dr. A. Martin. 1897.

Die Färbetechnik der Nerven-systems. Von Dr. B. Pollack. 1897. Price 2s.

Problems of Nature: Researches and Discoveries of Gustav Jaeger, M.D. Edited and translated by Henry G. Schlichter, D.Sc. 1897. Price 4s.

De la Voûte plantaire et du Pied creux congenital par malformations osseuses; par Dr. A. Jeanne (J. B. Baillière et Fils, Paris, 1897).—Annuaire des Eaux-Minérales, Trente-Neuvieme année, 1897 (Bureau de la Gazette des Eaux, Paris).—Report of the Registration of Births, Marriages, and Deaths in the Province of Ontario for the Year ending Dec. 31st, 1895 (Warwick Brothers and Rutter, Front-street, West Toronto, 1897).—Murray's Cyclist's Road Book, with an Atlas of the Road, 1897 (John Murray, Albemarle-street, London).—Medical and Surgical Report of the Presbyterian Hospital in the City of New York: Vol. II., January, 1897; edited by A. J. McCosh, M.D., and W. B. James, M.D.—La Revue Philanthropique; No. 1, 10 Mai, 1897 (Masson et Cie., Paris, 1897).—Suite de Monographies Cliniques sur les questions Nouvelles en Medecine, en Chirurgie, en Biologie: No. 1, de l'Appendicette; par Dr. F. Leguen (Masson et Cie, Paris, 1897).—The Journal of Physiology, Vol. XXI., Nos. 4 and 5, May 12th, 1897 (C. J. Clay and Sons, Ave Maria-lane, London); price 13s.—Boletins e Memorias da Sociedade de Medicina e Cirurgia do Rio de Janeiro, 11° Anno 1896 (Soares and Niemeyer, Rio de Janeiro, 1897).—Acta de la Sesión pública inaugural que la Real Academia de Medicina y Cirurgia de Barcelona celebro en 30 de Enero de 1897 (F. Sauchez, Barcelona, 1897).—Association of Surveyors of H.M. Service; Occasional Papers, 3rd Series; March, 1897 (King, Thorne, and Stace, Brighton); price 2s.—City of St. Louis Health Department; Nineteenth Annual Report of the Health Commissioner for the Year ending March 31st, 1896.—Archivos de Medicina, No. 3; 25 de Abril de 1897 (José Bastos, Lisbon).—Record Reign of Queen Victoria for Sixty Years: Portraits of Her Majesty, 1837 and 1897 (Marcus Ward and Co., Farringdon-street, London).—New illustrated Catalogue of GlassBottles, &c. (Kilner Brothers, G. N. Goods Station, King's-cross, London)—Magazines, &c., for June: Strand Magazine, Boy's Own Paper, Girl's Own Paper, Leisure Hour, Sunday at Home, Sunday Hours, Ludgate Magazine, Westminster Review, Contemporary Review, Friendly Greetings, Chapman's Magazine, Myra's Journal, Pall Mall Magazine, Windsor Magazine, Cornhill Magazine, Blackwood's Magazine, Pearson's Magazine, English Illustrated Magazine, Knowlekge, and Humanitarian.

Appointments.

Successful applicants for Vacancies, Secretaries of Public Institutions, and others possessing information suitable for this column, are invited to forward it to THE LANCET Office, directed to the Sub-Editor, not later than 9 o'clock on the Thursday morning of each week for publication in the next number.

ADAM, JOHN, M.B., C.M. Glasg., has been appointed Parochial Medical Officer by the Parish Council of Edinkillie, vice T. H. Fyfe, resigned.

ALLEN, C. P., M.R.C.S., L.R.C.P., L.S.A., has been appointed Assistant Resident Medical Officer to the North-West London Hospital.

ARMSTRONG, WM., L.R.C.P., L.R.C.S. Edin., has been re-appointed Medical Officer for the Boldon and Whitburn Sanitary District of the South Shields Union.

BABINGTON, S. N., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

BELBIN, H. ASHBY, L.S.A., has been appointed Junior House Surgeon to the Guest Hospital, Dudley.

BINCKES, F. W., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

BROWN, WILLIAM H., M.B., B.S. Durh., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the General Hospital, Birmingham.

CARAHER, MORE, L.R.C.P. & S. Irel., L.M., has been appointed Medical Officer to the Children's Hospital, Temple-street, Dublin.

DAWES, W. J., M.R.C.S., has been appointed Medical Officer for the Florence and Normacott Sanitary District of the Stoke-upon-Trent Union.

DEAN, EDWIN, L.S.A., has been re-appointed Medical Officer and Public Vaccinator for the Slaithwaite Sanitary District of the Huddersfield Union.

FRAZER, W. D., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

FAIRBAIRN, J. S., B.A., M.B., B.Ch. Oxon., L.R.C.P., M.R.C.S., has been re-appointed House Physician to St. Thomas's Hospital.

GALLOWAY, ALEXANDER RUDOLF, M.A., M.B., C.M. Aberd., has been appointed Physician to the Aberdeen Asylum for the Blind, vice Jas. McKenzie Davidson, resigned.

GERVIS, F. H., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

GILBERT, L., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

HALL, J. SPENCER, L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

HAYWARD, J. W., M.R.C.S., has been re-appointed Medical Officer by the Whitstable Urban District Council.

IVES, W. R. Y., L.R.C.P. Lond., has been appointed Medical Officer for the Portswood Sanitary District by the South Stoneham District Council.

JONAS, H. C., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

LAUDER, R. E., L.R.C.P., L.R.C.S. Edin., D.P.H., has been appointed Medical Officer for the No. 1 Sanitary District of the Southampton Union.

MACEVOY, H. J., M.D., B.Sc. Lond., L.R.C.P., M.R.C.S., has been re-appointed Clinical Assistant in the Special Department for Diseases of the Ear at St. Thomas's Hospital.

MADDEN, FRANK C., M.B., B.S. Melb., L.R.C.P., M.R.C.S., F.R.C.S. Eng., has been appointed House Surgeon to the Hospital for Sick Children, Great Ormond-street, W.C.

MARRIAGE, H. J., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

MARTINEAU, A. J., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

PATERSON, W. H. J., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

RIMELL, A. T., L.R.C.P. Edin., M.R.C.S., has been appointed Medical Officer for the Long Sutton and Tydd St. Mary Districts of the Holbeach Union, vice Langton, resigned.

ROUILLARD, J. A. A., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Throat at St. Thomas's Hospital.

SCATCHARD, J. P., L.R.C.P., M.R.C.S., has been appointed Junior Obstetric House Physician to St. Thomas's Hospital.

SCOTT, A. E., M.R.C.S., L.R.C.P., has been appointed Resident Medical Officer to the North-West London Hospital.

SELIGMANN, C. G., L.R.C.P., M.R.C.S., has been appointed House Physician to St. Thomas's Hospital.

SMITH, J. A., M.D. Lond., M.R.C.S., has been appointed Medical Officer for the First Sanitary District of the Parish of Willesden.

STAINER, E., M.A., M.B., B.Ch. Oxon., has been re-appointed House Physician to St. Thomas's Hospital.

STONE, W. GREAM, M.A., M.B., B.Ch. Oxon., F.R.C.S., has been appointed Clinical Assistant in the Electrical Department at St. Thomas's Hospital.

STRANGE, R. G., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

TAYLOR, G. E. O., L.R.C.P., M.R.C.S., has been re-appointed House Surgeon to St. Thomas's Hospital.

THOMSON, ARNOLD J., M.R.C.S., L.R.C.P. Lond., has been appointed Assistant House Surgeon to the General Hospital, Birmingham.

THORMAN, W. H., B.A. Cantab., L.R.C.P., M.R.C.S., has been appointed Clinical Assistant in the Special Department for Diseases of the Skin at St. Thomas's Hospital.

TOMBLESON, J. B., B.A., M.B., B.Ch. Oxon., has been appointed Senior Obstetric House Physician to St. Thomas's Hospital.

TUKE, A. W., L.R.C.P., M.R.C.S., has been re-appointed Assistant House Surgeon to St. Thomas's Hospital.

USHER, C. H., M.B. Camb., F.R.C.S. Edin., has been appointed Ophthalmic Surgeon to the Royal Aberdeen Hospital for Sick Children.

WHICHER, A. H., M.R.C.S., has been re-appointed Medical Officer of Health, Midsomer Norton, by the Urban District Council.

Vacancies.

For further information regarding each vacancy reference should be made to the advertisement (see Index).

ANCOATS HOSPITAL, Manchester.—Resident Junior House Surgeon. Salary £50, with board and washing.

CITY OF LONDON HOSPITAL FOR DISEASES OF THE CHEST, Victoria-park, E.—House Physician for six months. Salary at the rate of £30 per annum, with board and residence.

CONSUMPTIVE HOSPITAL AND ORPHAN HOMES OF SCOTLAND, Bridge-of-Weir.—Resident Medical Officer. Salary £80 per annum, with furnished apartments, board, &c. Applications to the Secretary, 194, St. Vincent-street, Glasgow.

DENTAL HOSPITAL OF LONDON AND LONDON SCHOOL OF DENTAL SURGERY, Leicester-square.—Demonstrator. An honorarium of £50 per annum.

DEVON COUNTY ASYLUM, Bedford-circus, Exeter.—Assistant Medical Officer, single. Salary £120 per annum, with board, lodgings, and washing.

DERBYSHIRE ROYAL INFIRMARY, Derby.—Assistant House Surgeon for six months. An honorarium of £10, awarded conditionally, and board, residence, and washing provided.

EAST SUFFOLK AND IPSWICH HOSPITAL, Thorofare, Ipswich.—Second House Surgeon, single, for one year. Salary £70 per annum, with board, lodging, and washing.

HEREFORD GENERAL INFIRMARY.—Honorary Physician. Also Honorary Surgeon.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—House Surgeon to the Out-patients (non-resident) for six months. Salary 25 guineas.

HOSPITAL FOR SICK CHILDREN, Great Ormond-street, Bloomsbury, London.—Resident Medical Superintendent for one year. Salary £105 a year, with board and residence in the hospital.

KENSINGTON DISPENSARY.—Honorary Medical Officer. Applications to the Honorary Secretary, F. Leach, Esq., 7, Stanford-road, Kensington-square, W.

MERCER'S HOSPITAL, Dublin.—Vacancies on the Surgical and Medical Staff

NATIONAL SANATORIUM FOR CONSUMPTION AND DISEASES OF THE CHEST, Bournemouth.—Resident Medical Officer. Salary £80 per annum, with board, lodging, and washing.

QUEEN'S HOSPITAL, Birmingham.—An Honorary Physician.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—House Physician for six months. Salary at the rate of £60 per annum. Also Junior House Physician for six months. Board and lodging, including washing, provided. Applications to the Secretary, City Office, 27, Clement's-lane, Lombard-street, E.C.

NORTH-EASTERN HOSPITAL FOR CHILDREN, Hackney-road, Shoreditch, N.E.—Surgeon. Applications to the Secretary, Offices, 27, Clement's-lane, E.C.

ROYAL HOSPITAL FOR DISEASES OF THE CHEST, City-road, E.C.—House Physician for six months. Salary at the rate of £40 per annum, with board, lodging, and washing.

ST. PETER'S HOSPITAL, Henrietta-street, Covent-garden, London.—House Surgeon for six months. Salary at the rate of £100 a year, with board, lodging, and washing.

ST. THOMAS'S HOSPITAL, Westminster-bridge.—Resident Assistant Surgeon.

VICTORIA HOSPITAL FOR SICK CHILDREN, Queen's-road, Chelsea, S.W.—House Surgeon for one year. Board and lodging in the hospital, and an honorarium of £50.

WANTAGE UNION.—Medical Officer and Public Vaccinator for the Vale District. Salary £50 per annum, with the usual surgical, vaccination, and midwifery fees. Applications to the Clerk to the Guardians, Wantage.

WEST LONDON HOSPITAL, Hammersmith-road, W.—House Physician. Also House Surgeon for six months. Board and lodging provided.

Births, Marriages, and Deaths.

BIRTHS.

BROOKS.—On May 19th, at St. Felix, Felixstowe, the wife of F. A. Brooks, M.D. Brux., M.R.C.S., L.R.C.P. Lond., of a son.

CARSON-SMYTH.—On May 18th, at Craven-park, Willesden, the wife of Alexander Carson-Smyth, M.B., C.M. Edin., of a daughter.

FARRAR.—On May 22nd, the wife of Dr. Reginald Farrar, of Stamford, Lincolnshire, of a daughter.

FRANCIS.—On May 25th, at St. Andrew's, Uxbridge, the wife of L. A. Francis, M.R.C.S., L.R.C.P., of a son.

NOBLE.—On May 23rd, at High-road, Leyton, Essex, the wife of Wm. G. Noble, Surgeon, of a son (Eric William).

THOMPSTONE.—On May 21st, at Marsh-parade, Newcastle-under-Lyme the wife of Sydney W. Thompstone, F.R.C.S. Edin., District Medical Officer H.M.'s Niger Coast Protectorate, West Africa, of a son.

WHITFIELD.—On May 21st, at Upper Berkeley-street, Portman-square, W., the wife of Arthur Whitfield, M.D., M.R.C.P., of a daughter.

WRIGHT.—On May 16th, at 31, New-road, Rochester, the wife of Clarence A. Wright, L.R.C.P. Edin., &c., of a daughter.

MARRIAGES.

COLEMAN—HOGG.—On May 25th, at the Parish Church, Pinner, James George Blyth Coleman, M.R.C.S., eldest son of the late Michael McDowell Coleman, of Madras, to Rosa, fourth daughter of Edward Hogg, of The Lodge, Pinner, Middlesex.

EVES—TULK-HART.—On May 18th, at St. Peter's Church, Brighton, by the Rev. A. R. Buckland, morning preacher at the Foundling Hospital, London, assisted by the Rev. Jas. Hussey, Rector of Pimperne, Dorsetshire, and the Rev. D. L. Secretan, of St. Peter's, P. Stanhope Eves, M.D. Lond., of 1, St. Peter's-place, Brighton, son of W. H. Eves, Esq., of Brunswick-square, London, to Alice C. Guinevere, only daughter of Eugene J. Tulk-Hart, M.D. Durh., of 4, Gloucester-place, Brighton.

MACLEOD—RUSTON.—On May 24th, at Newland Chapel, Lincoln, MacLeod Hendrie MacLeod, M.A., M.B., C.M., of Airliebank, Dundee, to Eva Jane, daughter of Joseph Ruston, Esq., of Monks Manor, Lincoln, and St. George's-place, Hyde-park, S.W.

PHEAR—LISTER.—On May 18th, at the Friends' Meeting House, Wanstead, Arthur George Phear, M.D., to Ellen Frances, daughter of Arthur Lister, J.P., of Leytonstone, Essex, and Lyme Regis, Dorset.

TAYLOR—MOORE.—On May 24th, at St. Mark's, Southampton, Algernon Taylor, Surgeon, &c., Dunraven House, Battersea-park, to Christine, second daughter of L. G. Moore, The Glen, Southampton.

DEATHS.

BOYD.—On May 15th, at Sydney, N.S.W., Robert John Boyd, Surgeon, son of the late Robert Boyd, M.D., of Bolton-row, Mayfair, and Southall-park.

HENRY.—On May 17th, suddenly, in London, Herbert George Henry, L.D.S. Eng., of East London, South Africa, in his 31st year.

LOWE.—On May 22nd, at Tunbridge Wells, John Lowe, M.R.C.S. Irel., L.R.C.P. Edin., of 90, Preston-road, Brighton, aged 42 years.

N.B.—A fee of 5s. is charged for the insertion of Notices of Births, Marriages, and Deaths.

METEOROLOGICAL READINGS.

(Taken daily at 8.30 a.m. by Steward's Instruments.)

THE LANCET Office, May 27th, 1897.

Date.	Barometer reduced to Sea Level and 32° F.	Direction of Wind.	Dry Bulb.	Wet Bulb.	Solar Radia in Vacuo.	Maximum Temp. Shade.	Min. Temp	Rainfall.	Remarks at 8.30 A.M.
May 21	29·95	E.	62	54	113	69	51	...	Fine
" 22	29·84	E.	54	49	111	64	46	...	Fine
" 23	29·82	N.E.	53	48	109	67	44	...	Fine
" 24	29·87	N.E.	49	47	103	61	47	...	Overcast
" 25	29·82	S.W.	50	48	113	71	45	...	Overcast
" 26	29·52	S.W.	55	51	79	60	50	0·05	Cloudy
" 27	29·36	S.W.	53	50	108	62	50	...	Cloudy

Medical Diary for the ensuing Week.

OPERATIONS.

METROPOLITAN HOSPITALS.

MONDAY (31st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St Thomas's (3.30 P.M.), St. George's (2 P.M., Ophthalmic 1.15 P.M.), St. Mary's (2.30 P.M.), Middlesex (1.30 P.M.), St. Mark's (2 P.M.), Chelsea (2 P.M.), Samaritan (Gynæcological, by Physicians, 2 P.M.), Soho-square (2 P.M.), Royal Orthopædic (2 P.M.), City Orthopædic (4 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.), Westminster (2 P.M.).

TUESDAY (1st).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), Guy's (1.30 P.M.), St. Thomas's (3.30 P.M.), Middlesex (1.30 P.M.), Westminster (2 P.M.), West London (2.30 P.M.), University College (2 P.M.), St. George's (1 P.M.), St. Mary's (2 P.M.), St. Mark's (2.30 P.M.), Cancer (2 P.M.).

WEDNESDAY (2nd).—St. Bartholomew's (1.30 P.M.), University College (2 P.M.), Royal Free (2 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), King's College (2 P.M.), St. Mary's (2 P.M.), National Orthopædic (10 A.M.), St. Peter's (2 P.M.), Samaritan (2.30 P.M.), Gt. Ormond-street (9.30 A.M.), Gt. Northern Central (2.30 P.M.), Westminster (2 P.M.).

THURSDAY (3rd).—St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), University College (2 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), London (2 P.M.), King's College (2 P.M.), Middlesex (1.30 P.M.), St. Mary's (2.30 P.M.), Soho-square (2 P.M.), North-West London (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (Gynæcological, 2.30 P.M.)

FRIDAY (4th).—London (2 P.M.), St. Bartholomew's (1.30 P.M.), St. Thomas's (3.30 P.M.), Guy's (1.30 P.M.), Middlesex (1.30 P.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), King's College (2 P.M.), St. Mary's (2 P.M., Ophthalmic 10 A.M.), Cancer (2 P.M.), Chelsea (2 P.M.), Gt. Northern Central (2.30 P.M.), West London (2.30 P.M.).

SATURDAY (5th).—Royal Free (9 A.M. and 2 P.M.), Middlesex (1.30 P.M.), St. Thomas's (2 P.M.), London (2 P.M.), University College (9.15 A.M.), Charing-cross (3 P.M.), St. George's (1 P.M.), St. Mary's (10 P.M.), Cancer (2 P.M.).

At the Royal Eye Hospital (2 P.M.), the Royal London Ophthalmic (10 A.M.), the Royal Westminster Ophthalmic (1.30 P.M.), and the Central London Ophthalmic Hospitals operations are performed daily.

SOCIETIES.

WEDNESDAY (2nd).—OBSTETRICAL SOCIETY OF LONDON.—8 P.M. Specimens will be shown by Dr. A. Routh and others. Paper: Dr. A. Routh: Parturition during Paraplegia.

THURSDAY (3rd).—NEUROLOGICAL SOCIETY OF LONDON (Physiological Laboratory, University College, Gower-street, W.C.).—8.30 P.M. Prof. Schäfer: Is there a Direct Relationship between the Motor Paralysis Produced by Lesions of the Cortex and Loss of Sensibility, Muscular or Other? (with experiments). Communication:—Prof. Boyce and Dr. Warrington: Some of the Ascending and Descending Nerve Tracts in the Fowl.

LECTURES, ADDRESSES, DEMONSTRATIONS, &c.

MONDAY (31st).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Leprosy.

LONDON POST-GRADUATE COURSE.—London Throat Hospital, Gt. Portland-st., W., 8 P.M., Dr. G. Stoker: Chronic Glandular Disease of the Nose and Naso-Pharynx.

TUESDAY (1st).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.).—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

LONDON POST-GRADUATE COURSE.—Hospital for Skin Diseases, Blackfriars, 4.30 P.M., Dr. Payne: Prurigo and Pruritus.

ROYAL INSTITUTION.—3 P.M. Dr. E. H. Starling: The Heart and its Work.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Gowers: Clinical Demonstration.

WEDNESDAY (2nd).—LONDON SCHOOL OF MEDICINE FOR WOMEN (30, Handel-street, Brunswick-square, W.C.).—6 P.M. Dr. P. Manson: Animal Parasites.

LONDON POST-GRADUATE COURSE.—Parkes Museum, Margaret-street, W., 4.30 P.M., Prof. A. Wynter Blyth: Sanitary Appliances.

HOSPITAL FOR CONSUMPTION, &c., (Brompton).—4 P.M. Dr. Schorstein: Bronchiectasis.

THURSDAY (3rd).—LONDON POST-GRADUATE COURSE.—Brit. Inst. of Preventive Medicine, Gt. Russell-st., W.C., 3.30 P.M., Dr. Allan Macfadyen and Mr. A. G. Foulerton: Quantitative Estimation of Sugar present in Urine.—Erlich's Diazo-reaction, &c.—Central London Sick Asylum, Cleveland-st., W., 5.30 P.M., Mr. W. Cheyne: Clinical Lecture.

FRIDAY (4th).—ST. GEORGE'S HOSPITAL MEDICAL SCHOOL (Hyde-park-corner, S.W.)—5 P.M. Dr. P. Manson: Diseases of Tropical Climates.

EAST LONDON HOSPITAL FOR CHILDREN (Shadwell).—3 P.M. Dr. J. A. Hayward: Marasmus.

LONDON POST-GRADUATE COURSE.—King's College, 3 to 5 P.M., Prof. Crookshank: Actinomycosis and Glanders.

NATIONAL HOSPITAL FOR THE PARALYSED AND EPILEPTIC (Bloomsbury).—3.30 P.M. Dr. Tooth: Paraplegia.

ROYAL INSTITUTION.—9 P.M. Mr. W. H. Preece: Signalling through Space without Wires.

Notes, Short Comments, and Answers to Correspondents.

EDITORIAL NOTICE.

IT is most important that communications relating to the Editorial business of THE LANCET should be addressed *exclusively* "TO THE EDITORS," and not in any case to any gentleman who may be supposed to be connected with the Editorial staff. It is urgently necessary that attention be given to this notice.

It is especially requested that early intelligence of local events having a medical interest, or which it is desirable to bring under the notice of the profession, may be sent direct to this Office.

Lectures, original articles, and reports should be written on one side of the paper only, AND, WHEN ACCOMPANIED BY BLOCKS, IT IS REQUESTED THAT THE NAME OF THE AUTHOR, AND IF POSSIBLE OF THE ARTICLE, SHOULD BE WRITTEN ON THE BLOCKS TO FACILITATE IDENTIFICATION.

Letters, whether intended for insertion or for private information, must be authenticated by the names and addresses of their writers, not necessarily for publication.

We cannot prescribe or recommend practitioners.

Local papers containing reports or news paragraphs should be marked and addressed "To the Sub-Editor."

Letters relating to the publication, sale, and advertising departments of THE LANCET *should be addressed "To the Manager."*

We cannot undertake to return MSS. not used.

HARTMANN'S HYGIENIC TOWELETTES FOR LADIES.

WE have received samples of a new pattern of Hartmann's towelettes which can now be supplied at a lower price than is charged for the style ordinarily in use. Both kinds, whether the low-priced or the more expensive, are made of Hartmann's patent wood-wool wadding enclosed in gauze, the only difference being in the size of the article. Wood-wool is an exceedingly soft and absorbent substance, which the manufacturers have rendered very suitable for the present purpose by means of a process of treatment which prevents it from cohering into an unserviceable mass when wetted. It has also been used as a material for surgical dressings. The towelettes are about nine inches long, two inches and three-quarters wide, and half an inch thick. The gauze with which they are covered is formed into loops at each end for the convenience of fastening. The towelettes are burned after being used. They are sold in packets of twelve for sixpence, so that the price of each is a halfpenny. The manufacturers are the Sanitary Wood-Wool Company, Limited, 26, Thavies-inn, Holborn-circus, E.C.

CHATTERIS URBAN DISTRICT COUNCIL.

The medical officer of health of this council has made remarks concerning the notification of infectious cases in his district which have caused some surprise at a recent meeting of the Council. One passage in his statement, as it appears in a local paper, strikes us as being particularly unhappy. He publishes an assumption that his private practice is twice the size of the practice of one of his neighbours, and states that in spite of that fact the notifications from his neighbour were doubly as frequent as those arising out of his own experience. The inferences that could be drawn from such a statement are clearly of an uncomplimentary character to a professional rival. The assertions of the medical officer of health have been categorically denied by his brother practitioner, but the neighbourhood will certainly desire to know who is right and who is wrong.

AN INSTRUCTIVE CORRESPONDENCE.

OUR attention has been drawn to a correspondence which has taken place between Mr. H. C. Burdett and the Hon. Stephen Coleridge. Mr. Burdett took the same exception that we ourselves did to Mr. Coleridge's letter addressed to the Prince of Wales, and appearing in the *Times* in March last. Mr. Burdett pronounced it ridiculous nonsense for Mr. Coleridge to write to the *Times* and "describe laboratories attached to hospitals where 'hapless dumb animals daily and hourly are slowly cut up alive without even the pretence of anæsthetics,'" and asked to be supplied with the names of the laboratories referred to. Mr. Coleridge did not supply the names; no one yet has been able to extract their names from him, but he wrote some long letters in which, if he meant anything, he meant to evade the point. Mr. Burdett, however, was obstinate and insisted that it was incumbent upon Mr. Coleridge's honour either to supply the names of the laboratories where "hapless dumb animals are daily and hourly cut up alive without even the pretence of anæsthetics" or to withdraw his statement. Mr. Coleridge continued to refrain from imparting the necessary information, but appeared to think that Mr. Burdett ought to be very much obliged to him for furnishing him "with facts relating to the financial connexion between hospitals and laboratories which your thirty years of hospital study had apparently overlooked." Mr. Burdett repeated his question, which Mr. Coleridge again omitted to answer, preferring to furnish illustrations and inferences instead of facts. It was then pointed out to him that analogy is not usually accepted as proof. Mr. Coleridge replied that his analogies had been introduced "not as proofs of facts, but as aids for the formation in Mr. Burdett's mind of a due estimate of the weight of my inferences." Mr. Burdett summed up the correspondence in the *Hospital* of May 15th by stating that "all the talk about cutting animals up alive without even the pretence of anæsthetics must be looked upon as sheer nonsense." And that is exactly how all sensible people have come to regard Mr. Stephen Coleridge's vapourings. If he had any facts we are bound to suppose that he would communicate them. But he has none. He has been guessing and gassing, and has not the grace to turn off the tap when his neighbours object to the smell. We recommend to the consideration of Mr. Coleridge the speeches of the Prince of Wales and of Dr. Pye-Smith, delivered on Wednesday last at Guy's Hospital.

H. M.—To the best of our belief no such course of instruction is given either at Aix-les-Bains or at an English spa. Our correspondent's best plan would be to get an introduction to one of the medical men who are known to be authorities upon the subject and ask for his advice.

AN OBSTINATE CASE OF ECZEMA: SUGGESTIONS WANTED.

To the Editors of THE LANCET.

SIRS,—About five months ago I was consulted by a patient who has been suffering from chronic eczema on his right leg for seven years. During this time he consulted several medical men in different parts of the country, and used their prescriptions without benefit. I put him on a course of iodides and prescribed him many ointments, stimulating and soothing, such as ointment of tar, ointment of zinc, ointment of sulphur, &c., and at first he improved rapidly; but since then the disease has remained stationary. May I ask you to kindly insert this in THE LANCET in the hope that some brother practitioner will give me the benefit of his experience in the treatment of obstinate cases of eczema.

I am, Sirs, yours faithfully,

Addlestone, May 13th, 1897. A. ALAMUDDIN, M.D.

Jolly-Boat-Boy has not communicated his name and address. We are therefore unable to return to him his inclosure. We do not recommend practitioners or give medical advice. Surely in all Paris our correspondent can find a medical man who will treat him on reasonable and proper terms.

THE HEALTH OF THE ARMY IN INDIA.

OUR attention has been called by a correspondent to a communication in the *Pioneer Mail* of April 29th on the above subject, in which great stress is laid on the fact that, although there has been an unquestioned increase of venereal disease in most stations in all the several commands in India, there has, nevertheless, been a striking decrease in the admission-rates of some of them. Some useful information may probably be obtained by local inquiry as to the causes of this difference, but it does not seem to us really to affect the question. The broad fact remains—viz., that the amount of these diseases has greatly increased, and is still apparently increasing, and the quality of the constitutional form of it has become much worse. It does not follow that we need return to the Acts exactly as they were in the past, but it does follow, as it seems to us, that remedial measures of some sort are most urgently required. The Indian Government is now considering what these should be.

COLLES'S FRACTURE AND THE ROENTGEN RAYS.

DR. EUGENE R. CORSON contributes an original article entitled "Some Observations on Colles's Fracture by the aid of the X Rays" to the *New York Medical Record* of May 8th, which tends to correct some notions of this troublesome and unsatisfactory injury and to suggest simple lines of treatment. He gives four figures purporting, respectively, to represent the following cases. 1. Comminuted Colles's fracture, with the styloid process of the radius broken off and tilted out, the callus being rapidly absorbed; the styloid process of the ulna broken off; and displacement of the hand and ulna. 2. Transverse fracture of the left radius one inch above the articular surface, with perfect reposition of fragments; the styloid process of the ulna broken off; and displacement of the hand and ulna. 3. Displacement of the hand and ulna (diagnosed as Colles's fracture, but only a severe sprain with displacement of the hand to the radial side due to rupture of the internal lateral ligament). 4. Displacement of the hand and ulna with the radius intact; the fractured styloid process of the ulna, being the only injury to the bones. Dr. Corson finds in his observations proof of the views of Hamilton attaching importance to the rupture of ligaments, especially the internal lateral ligament, aided by rupture of the anterior and posterior ligaments, as the chief cause of the most prominent and unsightly deformity in Colles's fracture, the hand slipping toward the radial side and the ulna forwards and towards the radius. There may be considerable deformity without any fracture, and if there be only transverse fracture of the radius without tearing of the ligaments there may be little displacement and a good result with any treatment. Another of his conclusions is that, as Nelaton taught, the styloid process of the ulna is frequently broken off. The fractures are, he thinks, easily reduced by gentle and continuous extension and a certain amount of flexion, abduction, or adduction, according to the case. The more important part of the treatment is to reduce the inflammation and swelling with fomentations, to keep the forearm and hand perfectly prone and in a direct line with each other on a straight splint, slightly padded to suit the flexures of the forearm, wrist, and palm, extending from one inch below the elbow to the metacarpo-phalangeal joints, so as to admit free movement of the fingers—"a very important matter," as he well says, which tends to prevent that permanent stiffness of the wrist and hand which, more than the deformity, disappoints the patient and the surgeon.

X. Y. Z.—Poverty may be considered an emergency for the purposes of our reply. If circumstances permit of the assistance it is well to have it, but for this reason or that it has often to be dispensed with.

STARVATION PRICES.

To the Editors of THE LANCET.

SIRS,—Copies of the enclosed handbill have been distributed broadcast in this locality

I am, Sirs, yours truly,

May 15th, 1897. DISGUSTED.

[ENCLOSURE.]

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*** It is regrettable that such prices should be voluntarily accepted by medical men.—ED. L.

Mr. Frank E. Wrench (Maple Creek).—Undoubtedly the world has grown more liberal of late, but if anything is more calculated to retard the well-being of the race than undue distrust it is unjustifiable credulity.

THE PROFESSIONAL VAGRANT.

SOME very pointed remarks were made by an emissary of the Local Government Board—Mr. Davy, one of the inspectors—at a meeting of a Sussex board of guardians the other day. Mention has been made in THE LANCET of a scheme adopted in West Sussex for weeding out the professional vagrant. Bread is supplied in every place on application to the local constable, and a pass-card is handed to the tramp which shows where he has called. At the same time the fact is advertised far and wide that there is no excuse for men to beg for either food or lodging, and *bond-fide* workmen, indeed, are helped on. During the last half-year this had the remarkable effect of thinning out the tramps by over one-third—that is to say, that number less passed through the unions. Every union but one supported this scheme, which cost but the modest sum of £13 10s. in the six months. That union is Horsham. Last week Mr. Davy said that no amount of Local Government Board orders could have produced the unanimity which the remaining unions had themselves secured, and he did not like to see one standing out. It is probable that the Horsham guardians will come into line, and the action of Mr. Davy is the more appreciated from the fact that hitherto the support the Local Government Board has accorded the scheme has been of a partial and almost unofficial character.

Mr. Edward Long.—We do not see how any development of x ray therapeutics could lead to the fortunate results suggested by our correspondent.

"THE PUBLIC HEALTH EXAMINATION AT CAMBRIDGE."

To the Editors of THE LANCET.

SIRS,—What your correspondent "M.D." has to say about the inefficiency of the apparatus in the practical bacteriology applies much more forcibly to the apparatus provided us in the gas and water analyses. The test solutions were not all of the strength ordinarily used in laboratories. The water bath supplied me was so small that it would only accommodate one evaporating dish at a time. I had only one graduated hand-burette, which had to be used for all purposes. The first stand-burette I had given me was broken off about a third of its length and the next given me had a large a diameter, and the spaces denoting tenths of a cubic centimetre were so small, that it was only with the greatest care that small additions of the standard ammon. chloride solution could be made. The two-foot tube supplied to me (after waiting a quarter of an hour for it) was closed at *both* ends and could only be filled by holding it horizontally and dribbling the water through a tiny hole in the side. Seeing this would take twenty minutes to fill I abandoned its use altogether. Time is valuable when only three hours are allowed for a complete analysis of water and a quantitative analysis of three gases. Half an hour at least must be devoted to properly writing out your report, and another half hour is wasted in remedying deficiencies of apparatus or waiting for apparatus and reagents not on your bench to be brought you when another candidate has finished with them. At least four hours should, in my opinion, be given for the practical chemistry, and even then it would be a busier time than the four hours each that are given for practical bacteriology and the practical microscopy. My experience justifies me in complaining that candidates at Cambridge D.P H. examinations are not allowed full opportunity of doing justice to their practical knowledge, but are hampered and confused either by lack of the usual reagents and apparatus or their improper condition.

I am, Sirs, yours faithfully,

May 19th, 1897. W. T.

Clerk has done well, although the appearances were suspicious.

A SAPIENT TOWN COUNCIL.

THE medical officer of health of Kidwelly, South Wales, has had some remarkable experiences in connexion with his salary. At first it was fixed at £20 per annum; this was increased to £35, where it stopped for three years, when it was reduced to £12 10*s*. A year later it went down to £10, but the town saved nothing by this, as when the salary was £20 and over the Local Government Board paid half, but immediately it was under that amount Kidwelly had to pay it all. For this reason the council on May 11th suggested £20 again, but the proposal was lost by eight votes to seven.

THE INTERNATIONAL TROOPS IN CRETE.

CRETE is far from being a desirable station at the present time. Its towns and villages are not the most sanitary and cleanly places in the world. The troops that have been landed in the island are stated to be enjoying excellent health, but there have been two mild cases of small-pox in the Highlanders. Small-pox is rather prevalent among the Cretan population at present. The British and Italian troops, the correspondent of the *Broad Arrow* reports, fraternise a good deal together. The Turkish troops, he adds, are not well clad or equipped, but they are patient, well behaved, amenable to discipline, and good soldiers.

A FLOATING AMBULANCE AT THE SEAT OF WAR.

FROM Volo an Italian correspondent writes that on the 7th inst. he left that port at midday on board the *Albania*, a real "floating hospital," whose *personnel* included Mr. Osborn, with a number of ladies of the English Red Cross, Dr. Müller (a Swiss), and Dr. Cantas (a Greek), assisted by ladies of the Greek Red Cross. They were tending and treating a hundred wounded Greeks and volunteers, while a priest was at hand to vouchsafe the consolations of religion. Besides the cabins, the deck and "bridge" were set apart for the patients lying on stretchers. The weather he describes as "incantevole" (enchanting), in strange contrast to the "tristezza" (sadness) of the floating ambulance, whence the air was filled with the moans of the sufferers. By 5 P.M. two of these had breathed their last. Very severe was the agony of a soldier whose right leg was smashed by a "mitrailleuse." The surgeons attempted amputation, which was performed as the patient lay extended on a table on the "bridge"; but he succumbed under chloroform, so low had the powers of life run. His last words before being fully anæsthetised, uttered with a voice of anguish, were "Emanula, Emanula, piccola madre mia" (Emanula, Emanula, my little mother). By 5 30 P M. Stylidas was reached and six more wounded, all from Pharsala, were taken on board. These were members of the foreign legion—four English and two Italians. The latter were one Alessandrini of Modena, whose right leg had been traversed by a projectile without its having touched the bone, and one Balducci of Bologna, whose right arm had been similarly perforated by a ball, the bone again remaining intact. There were thirty-three Italians in the foreign legion posted at the extreme left of the Greek lines at Triscoli, a point some ten miles from Pharsala. There, with 700 Greek infantry, the legion, without ordnance, had to face a strong Turkish force with eight cannon. Nevertheless, they pressed on till they came within three miles and a half of Pharsala, by which time the legion had twenty wounded. Nearer Pharsala they came within close range of 7000 Turks. In the encounter Alessandrini and Balducci received their wounds, and Captain Barattazzi (Greek), who commanded the legion, was himself severely wounded. By general testimony the English members of the legion and the Italians fought most courageously of all. In the Greek camp, according to the same correspondent, the medical department was very badly supported and provided. "At Pharsala itself," he adds, "not a single Red Cross ambulance was present." On the voyage of the *Albania* the two dead, accompanied by the priest, were buried at Stylidas, and the same night two more died and were landed for interment next morning at Malcis. By this time the moribund amounted to twenty, mostly with abdominal wounds. One, from a wound on the cranium, had a great part of the cerebrum carried away, but was still active and able to express his wants; another had the hip-joint smashed by a "mitrailleuse." The surgeons say that in this campaign whenever a projectile has touched a bone it has caused a comminuted fracture. One unfortunate among the wounded went raving mad and could with difficulty be kept bound to his stretcher. The wounded officers on board the *Albania* were unanimous in declaring that on the Greek side the fortunes of the campaign were compromised by the paramount blunders of the two retreats, but that the defence can be maintained along the line of the old frontier. They expressed the greatest confidence in Smolenski, who, they said, deserved to be put in supreme command.

COMMUNICATIONS not noticed in our present issue will receive attention in our next.

During the week marked copies of the following newspapers have been received:—*Coleshill Chronicle, Rochester Journal, Sheffield Independent, Eastern Morning News, Birmingham Gazette, Newcastle Chronicle, Bradford Observer, South Wales News, Times of India, East Anglian Weekly Times, Pioneer Mail, Rugby Advertiser, Builder, Darwin Post, Preston Herald, Liverpool Daily Post, Kendal Mercury, Leicester Post, Walsall Advertiser, Architect, Alresford Herald, Harrow Press, Southport Visitor, Yorkshire Post, Brighton Gazette, Hastings News, Northampton Mercury, Derbyshire Courier, Dudley Herald, Worcester Advertiser, Weekly Echo (Sunderland), Chatham News, Windsor Chronicle, Maidstone Journal, Sussex Daily News, Huddersfield Examiner, Lancashire Express, Wellington News, Bristol Mercury, Kent County Examiner, Folkestone Chronicle, Kidderminster Shuttle, Portsmouth Times, Yarrow Express, Scotsman, Leeds Mercury, Hampshire Independent, Bromley Herald, Local Government Chronicle, Hertfordshire Mercury, Mining Journal, Weekly Free Press and Aberdeen Herald, City Press, Reading Mercury, Sanitary Record, Maidstone and Kentish Journal, South Africa, Surrey Advertiser, Reynolds' Newspaper, Nuneaton Observer, Local Government Journal, Leek Times, Public Health, Engineer, Isle of Man and Daily Times, Kenilworth Advertiser, West Middlesex Herald, Halifax Courier, Montrose Standard, &c., &c.*

Communications, Letters, &c., have been received from—

A.—Mr. E. Arnold, Birmingham; Messrs. Armour and Co., Lond.; Albion Steamship Co., Newcastle-on-Tyne, Manager of; Prof. Clifford Allbutt, Cambridge; A., Lond.; Mons. J. Astier, Paris; Messrs. Armbrecht, Nelson, and Co., Lond.; Ancoats Hosp., Manchester, Sec. of.

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T.—Mr. J. Thin, Edin.; Messrs. E. B. Treat and Co., New York; A. Thirchhoff, Berlin.

U.—University College, Bristol, Sec. of; University of London, Registrar of.

V.—Victoria Hospital for Sick Children, Lond.; Vigor, Lond.

W.—Mr. A. J. Wilson, Lond.; Mr. F. B. Wyatt, Lond.; Mrs. Walsh, Lightcliffe, near Halifax; Miss Whitaker, Streatham; Watt, Stratford; Wantage Union, Berks, Clerk of; Mr. T. I. Wallas, Lond.; Dr. E. C. Williams, Bristol.

Y.—Messrs. C. Yarrow and Co., Lond.

Letters, each with enclosure, are also acknowledged from—

A.—Mr. J. Allen, Norwich; Alpha, Lond.; Asylum, Lond.; Apex, Lond.; Accoucheur, Lond; A. H., Burton-on-Trent; Althorpe, Lond.

B.—Mr. F. W. Bartlett, Romsey; Beta, Cardiff; Dr. J. S. Belcher, Lond.; Miss L. Biggs, Malvern Wells; Dr. Blackwall, Lond.; Mr. H. Harnham, Lond.

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D.—Mr. G. C. Davies, Pontlottyn; *Devon and Exeter Gazette*, Exeter, Proprietor of; Messrs. T. Dixon and Sons, Lond.; Doctor, Lond.; Dispenser, Hampstead; D. G., Lond.

E.—Excelsior, Lond.; E. T. E., Lond.

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